

# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Vol. XIV

GRAND RAPIDS, MICHIGAN, AUGUST, 1915

No. 8

### Original Articles

#### THE MECHANISM OF URINARY OBSTRUCTION IN RELATION TO VARIATIONS IN RENAL FUNCTION.\*

H. W. PLAGGEMEYER, M.D.  
DETROIT, MICH.

The frequency with which one encounters partial or complete interference with the free act of urination, and the importance of the local and remote sequellae of such an untoward condition, are being more and more vividly impressed upon the mind of the active practitioner of the present day. In the past we were inclined to relegate a large proportion of these cases, which were not frankly due to prostatism into the class of "inflammation of the bladder," and to treat them purely from a medical standpoint, especially in the cases occurring in men under 40 years of age.

In the light, however, of more recent and more exact findings in the domain of urology, the relative importance of conditions *at the bladder neck* in regard to urinary obstruction is worthy of consideration.

It is not my intention to take up an exhaustive study of all the many factors which might adversely affect the outflow of urine. Many of these influences are obvious and do not call for differential study. Thus, we have all seen cases of persistent phimosis where the outlet at the meatus is so small that the urine will only come away drop by drop; in persistent cases of this type the patient often finds himself possessed of a supernumary bladder formed by his own prepuce which bulges out into a large sack on urination, and which he empties at leisure by pressure from without. Dorsal incision followed by circumcision of course relieves this situation at once, usually without any involvement of the tract higher up.

In regard to conditions of hypospadias with marked right-angled deflection at the external meatus, it has been found in a large number of cases, that the partial obstruction to free outflow did not cause enough back pressure in the kidneys to appreciably impair function.

Contraction of the calibre of the urethra due to stricture or to pressure from different causes outside its walls have all been discussed at length by many observers, and it has recently been shown that tumors of the verumontanum, in themselves rare in occurrence, have not caused enough back pressure to affect renal function, this being due in these cases to the natural distensibility of the roof of the urethra, which gives way under the pressure of the urinary stream permitting a normal outflow, or one so closely within range of normal that with very mild compensatory hypertrophy of the bladder wall, the ureters and kidneys are protected from back pressure and the function of the latter remain normal.

There is, however, one condition in the prostatic urethra to which I should like to call attention. I have seen two such cases within a year, one in a child of five, and another in a boy of sixteen, and still a third case has been reported by Lowsley of New York within the past few months. To the best of my knowledge these are the only cases in the American literature though European literature swarms with them, eighteen different clinics having reported one or more cases.

The type of case to which I refer is not commonly recognized and yet from the number of cases reported by different observers abroad, it cannot, in actual fact, be so very uncommon if looked for, and might be worthy of brief description.

Ordinarily the verumontanum, which is formed by the ingrowth of the Wolffian and Mullerian ducts and their accompanying muscular coats and which lie on the floor of the prostatic urethra becomes smaller and smaller at its lower portion, where its fibres finally disappear by spreading out on the floor of the

\*Read before the Kent County Medical Society, April 24, 1915.

urethra. In the type of case referred to, some of the tissue of the verumontanum is disposed in the usual way, but a considerable portion of it continues down to the membranous urethra, where it divides into two portions and then attaches itself intimately to the wall of the urethra leaving only a very small slit-like opening on the floor of the urethra.

The manner in which the division into two rather thick membranous bands usually occurs, and also the fact that the entire structure is more or less dome shaped when seen at autopsy make the term "diaphragm" suggested by Hugh Young seem most appropriate in referring to this anomaly. Almost complete obstruction to urinary outflow is caused by this unusual arrangement, and in the cases I have seen, there was such a great back pressure on the bladder, ureters and kidneys, that the function of the latter was practically nil, only a trace of phenol-sulphonphthalein appearing at the end of two hours with high blood urea content.

Of course in such cases of congenital malformation expectation of life depends upon the actual amount of stricture caused. If the opening were large enough, the bladder might be able to compensate for many years and thus protect the kidneys from back pressure, but in all the recorded cases, the opening has been so small that the cases presented early in life and rarely lived to the age of fifteen before kidney function failed entirely, with death from suppression.

Usually in these congenital cases the dilatation of the urinary tract must begin, at least theoretically, as soon as any considerable amount of urine is secreted by the kidneys. On account of the obstruction to urination, the bladder fills up, and its continual contraction in an attempt to empty itself, causes an enormous thickening of its wall, and by hydrostatic pressure of long standing dilates the vesical sphincter to such an extent that it becomes absolutely ineffectual, only a small ridge being left to mark its site; the posterior urethra thus becoming cone shaped and directly continuous with the bladder lumen. This condition simulates that found in tabes, but the presence of the obstructing veil would serve to clarify the diagnosis.

The bladder itself, in these cases, usually develops an extensive hypertrophy of the wall, instead of undergoing a thinning out process, and *this is due to the fact that the pressure is gradual and long continued, instead of sudden and of short duration.* The ureters and

pelves of the kidneys apparently do not respond by an extensive thickening comparatively speaking, or at least if they do so, at first, the increase in pressure overcomes such thickening and these structures, being architecturally less competent than the bladder and prostatic urethra, become enormously dilated and thinned out and ultimately complete loss of function ensues. In the hydronephrosis which results, we have the remarkable picture of an organ secreting fluid under a gradually increasing pressure produced by itself, which finally brings about its own destruction.

It is rather difficult to explain why this particular anomaly should occur so frequently, as the point of obstruction in these cases is above the junction of the bulbous and membranous urethra, which is the generally accepted point of division between that portion of the urethra which develops from the entoderm and that which is derived from the ectoderm. It would seem to be, not so much a lack of continuity in the connecting parts, as is seen in congenital cystic kidney, but rather, a mucous hyperplasia—an overgrowth of the wall of that part of the urethra, which having nowhere else to dispose of itself, plasters itself in two half circles, around the circumference of the urethra, forming an almost complete obstruction to the bladder outflow.

Undoubtedly a great many of these cases have advanced to such a degree that there is very serious renal involvement and impairment of function at the time of birth, but since a number of the reported cases lived for several years, it seems most important to urge upon the medical profession that any children who show a urinary output below normal, a dribbling of urine, abdominal masses in the kidney region, or other signs and symptoms pointing to a disturbance of the urinary organs should have a thorough urethral exploration, and obstructions such as the type described, may be relieved by proper instrumental treatments. One practical point to be remembered is that where there is a patent omphalo-mesenteric duct opening, with the passage of urine through the umbilicus, the diagnosis of this type of obstruction is practically made without further examination.

This brings us then to a study of the most important locus of obstruction—about which there has been so much discussion; the bladder neck, that battle ground of urologists for the past five years, and it might be well to consider briefly the differential diagnosis of the several

factors contributing to urinary difficulty at this point, for it is no uncommon thing for a patient to present himself complaining of difficulty in urination or even complete retention, and the examining physician is surprised to find on putting his finger in the rectum, that the prostate seems to be perfectly normal in size. It must be remembered that the prostate, while a frequent offender is not by any means the only source of trouble at the bladder neck, as I shall attempt to show.

Several studies have recently been published on the mechanism of prostatic retention, concluding with the statement that prostatic hypertrophy is not the cause of prostatic retention. The inference is that prostatic hypertrophy may exist without retention, and that the true cause of retention is to be sought rather in the bladder muscle or its innervation, than at the bladder neck. This is what the French school calls prostatism without a prostate.

Two clinical types of prostatic retention may be distinguished: chronic, incomplete or complete retention and acute complete.

It is with the chronic type that one has really to deal, for the elucidation of the mechanism of this condition make the explanation of the acute condition a matter of but a few words.

Prostatic retention represents the interaction of two forces—naturally—viz: the bladder muscle and the obstruction.

*Bladder Muscle.*—In discussing the action of the bladder muscle, we have to note:

The condition of the muscle itself.

The condition of the nervous system governing it.

The condition of the will.

*The Muscle Itself.*—Suprapubic cystotomy on an old prostatic often reveals a bladder muscle that grossly resembles "blotting paper," and obviously possesses no contractile force. Quite as often, however, one encounters a muscle with all the microscopic and macroscopic evidence of vitality.

We can all recall many instances of complete cure after prostatectomy in spite of a "blotting paper" bladder: nevertheless, these are a little more liable to incomplete relief than are their brothers with more normal muscle. Indeed an experienced urologist can prophesy with a certain degree of accuracy that the patient with slight infection and less than 100 cubic centimeters retention, but undue urinary irritation and frequency is likely to remain in this condition for some time, for the findings show that the bladder is thick walled and strong, or he

would have more residual. On the other hand the patient who first comes to a physician after his bladder has silently reached chronic, complete retention with overflow will do badly. I spoke a moment ago of patients who already have a slight infection, under the class of those who do well under operation. This is true, for very often we find a bad result on a previously uninfected case which has become infected after operation, while the old stager who has long since been infected, and has acquired a local immunity has an uneventful convalescence.

We may say then, that the progressive weakening of the bladder muscle doubtless is the main agency in the rapidity or slowness with which a patient passes through the first and second to the third stage of prostatic retention. However one must not overlook the influence of the nervous system and the will.

The most striking example of the influence of the nervous system is in tabes.

Here the muscle of the bladder is seriously or completely paralyzed, and the internal sphincter muscle loses its tone, and relaxes, at the same time that the external sphincter shuts down sharply. This causes the posterior urethra to really open up, and become part of the bladder, and with the cystoscope in the bladder the verumontanum is plainly seen lying in the floor of the bladder. Also the catheter in being passed into the bladder, immediately draws water in passing the external sphincter. *This fact alone should always make one suspicious of tabes, and lead one to seek for further signs.*

Koll of Chicago has recently published a series of twenty-five cases, of bladder types which he considers diagnostic of tabes. The three points he brings out as of fundamental importance in diagnosis are:

1. Lateral trabeculation.
2. Wide, rigid ureteral orifices.
3. Thickening of the interureteric ridge.

Koll has not painted the whole picture, I think. The lateral trabeculations, with no trabeculations on the floor, and the gaping urethral orifice are undoubtedly present in practically every case of tabes, but the trigone may present either an interureteric ridge as Koll describes, or may be normal, or may even be atrophied beyond the point of recognition. So the trigonal enlargement is not an invariable finding. However, with a dilatation of the posterior urethra as previously described, and lateral trabeculations with a normal floor, accompanied by wide sluggish ureteral orifices which might, in a way, be compared with the Argyll-Robertson pupil,



the diagnosis of tabes may often be made by the urologist before other findings become positive.

Just what effect this condition alone has on kidney function is difficult to determine for usually in patients presenting this type of lesion, an interstitial nephritis has long ago supervened and the back pressure offered is only another burden added to a pair of glands already functioning below normal. In the type of case accompanied by a raised trigone it has been found that a division of the bar by Chetwood's prostatectomy, or by Young's punch operation usually gives relief, and at this point it would seem appropriate to state that, where there is tabes plus definite prostatic obstruction, prostatectomy is indicated. There will not necessarily be incontinence afterward as many surgeons seem to fear, for it must be remembered that nature has so arranged that the external sphincter muscle takes care of the portal of exit in these cases.

*The Will.*—The influence of the will upon retention of urine in typhoid and other wasting diseases has been beautifully described by Samuel Alexander. He ascribed retention in such cases to actual muscular weakness combined with weakness of the powers of attention. Doubtless many of us have seen similar cases or at least cases in which, after prostatectomy the patient habitually retains from two to four ounces of urine, whereas if one injects even a mild solution of potassium permanganate or silver nitrate, it is emptied to the last drop. This is well to keep in mind in certain neurotic cases.

It seems fair to state that the strength of the bladder muscle plays a large part in certain cases of prostatic retention; and that if muscular weakness is the predominant cause of retention, removal of the obstacle at the bladder neck, which is the occasion of the retention, is a more delicate matter than when the bladder muscle has retained its strength.

#### THE ENLARGED PROSTATE.

Let us repeat with Sir Henry Thompson, that not more than half of the men whose prostates are enlarged suffer from prostatic retention, and let me again add that some of those who suffer from so-called prostate retention have no hypertrophy of the prostate. These are the two facts which impress those who deny that enlargement of the prostate has anything to do with retention of urine. But they go too far in their conclusion. It is quite obvious that, in a large number of cases, prostatic retention is

due to hypertrophy of the prostate, and it is equally obvious that in most instances the removal by prostatectomy of the hypertrophied portions of the prostate relieves the retention but this is not always the case.

After going into a seriatim study of all the possible combinations at the bladder neck, one is forced to the conclusion that even the lateral compression of greatly enlarged lateral prostatic lobes probably has little or no effect in interfering with the outflow of urine, for no matter how large the lateral lobes may be, by the very nature of their enlargement, water could pass through between them at the bottom, and the greater the bulging the greater the opening.

#### THE BLADDER NECK.

It is rather to the floor of the bladder neck that we must look for a solution to the problem. The commoner types of obstruction may be classified as follows:

1. Middle lobe hypertrophy (The prostate has five lobes.)
2. Lateral lobe hypertrophy, without a clinically recognizable middle lobe.
3. General hypertrophy, in which neither middle or lateral lobes are prominent.
4. General hypertrophy, in which middle or lateral lobes or both are prominent.
5. Contracted bladder neck, the so-called fibrous median bar.

Fortunately we are not compelled to go into a seriatim study of these mechanical obstacles to urination. The obstacle is much the same in either case.

If one passes one's finger into the bladder through a perineal opening into the urethra, the prostatic lobes may be felt bulging into the canal laterally, but one is always struck by the fact that the chief obstacle is at the neck of the bladder whether this obstacle is due to prostatic hypertrophy in the form of a middle lobe or bar, or to sclerosis in the form of a contracted bladder neck. One also notes the fact that when the bladder neck is tightly contracted, *this contraction occurs almost wholly at the expense of the floor*, while if only the lateral lobes of the prostate are enlarged the obstacle to the entrance of the finger into the bladder is a veil or bar of bladder neck lifted up between these lateral lobes. No matter what type of pathological entity is present, the finger always recognizes that between it and the bladder, on the *floor* of the urethra there is elevated this abnormal obstruction, and *this obstruction is the mechanical cause of urinary retention*. It arises from the floor and not



from the roof, even in cases of contracture and of lateral prostatic hypertrophy, because the roof of the urethra is more fixed (by the pubo-prostatic ligaments) than is the floor, and cannot be pulled down to form a curtain or veil.

The precise way in which this obstacle interferes with the outflow of urine from the bladder has never been absolutely proved. Unquestionably, it prevents the normal opening of the internal sphincter, thus causing the difficulty in starting the urinary stream. But why does it in so many cases reduce the bladder to a condition of partial retention in which the amount of residual urine is practically constant whether the patient stands upon his head or upon his feet? The explanation of the phenomenon is suggested by the fact that if a bubble of air is injected into the normal bladder this always issues after the last drop of urine is passed. In other words, the bubble floating on top of the urine under the vault of the bladder is the last thing to issue from the bladder in a normal urinary act. Moreover, if the bladder contains thick, tenacious pus delivered from a pyonephrosis, and lying upon its base, this pus will issue at the end of the urinary stream, and immediately ahead of the bubble of air which closed the stream. If there is retention of urine neither the pus at the bottom of the bladder nor the air at its vault are extruded.

To explain these phenomena we must assume, that, as the bladder empties itself, the trigone is somewhat elevated, forming the flare of a funnel, which in a normal bladder begins in the prostatic urethra, and the remainder of the bladder closes down upon this funnel, the lowest and highest points in the bladder cavity lying posterior to the trigone and being emptied last. But when there is retention the funnel is an inadequate one, the bladder neck fails to open as it should, and the result of the effort to squeeze out the last drops of urine is to close the bladder neck. The closure should be interpreted not as a sphincteric gripping, but as the driving of the prominent lower lip of the bladder neck against the upper wall of the prostatic urethra. If the closure were sphincteric a hard push might force it and drive out a few drops more of urine, but inasmuch as it is rather the application in the form of a valve of the prominent lower portion, the harder the patient strains the tighter does the valve close. The only way he can pass any more urine is by relaxing his muscles and permitting the sphincter to open a little. Then another effort

may bring forth quite a flow of urine before the valve flaps shut again.

A most important point to consider at this juncture is the frequency with which one encounters, in pathological specimens, a small encapsulated nodule, usually the size of a very small hazel nut, located just inside the internal sphincter of the bladder, at the point where the trigone dips into the urethra. This enlargement is a hypertrophied condition of a normal gland lying at this point, and described long ago by Albarran. This gland is racemose in type, and, as described by Albarran, is entirely submucous in character, having about a dozen small ducts emptying into the bladder neck just proximal to the ducts of the middle lobe of the prostate. Being purely submucous in character it lies entirely outside the histologic plane of the prostate, and in the process of hypertrophy it surrounds itself with its own fibrous capsule.

We have all been struck many times with the frequency with which after a perineal prostatectomy, there persists a large residual urine, and Young has explained this by saying that in a large number of cases the operator only took out those portions of the gland which come immediately into contact with the operating finger; in this way the hypertrophied portions of the gland which often runs up into the lateral cornua of the prostate cavity, well beyond the corners of the trigone during the very convalescence of the patient, drop down into the lower portion of the fossa left after enucleation and cause secondary obstruction. This is undoubtedly true, but part of the truth lies in the fact that the gland of Albarran is a much more frequent offender than we have previously suspected, and unless due precautions are taken to enucleate this gland also where it is offending, one will, even after deep enucleation of the prostate, be surprised to find that the patient still has a post-operative retention.

Many times has the writer removed this gland, thinking it was a portion of the middle lobe, until it was noted that each time it had to be removed separately after cutting through its individual capsule and shelling it out. Lowsley at Bellevue, went carefully through a series of 354 prostates, microscopically, and in all cases, ranging from 5 years to 70, found that Albarran's enlargement was present in 15 per cent. and that in all cases between 30 and 40 years of age, the enlargement was present in 27 per cent. of cases. It is in this condition then that a very large number of cases of urinary reten-

tion occur, when by the rectum, no enlargement of the prostate is felt, simply because there is no enlargement of the gland present—the cause must be sought through the cystoscope and even then one must not be misled by an apparent normal condition of the lateral lobes, because as before remarked, the prostate itself may have nothing to do with it. With the cystoscope in the bladder this gland may be well made out lying by itself, and behind the place where the middle lobe of the prostate would lie. The fact that its frequency has previously been overlooked is due to the fact that it was usually mistaken for middle lobe hypertrophy.

The strategic position of this enlargement, even when so small as almost to escape attention, lying as it does right in the floor of the opening, renders it, by the same token, an added menace to operative success. For as before remarked, though urine may pass, often with great facility through two greatly hypertrophied lateral lobes the tiniest nub of subcervical enlargement may cause a tremendous residual urine with subsequent alarming symptoms of back pressure on ureters and kidneys, with consequent diminution in function on both sides, and a phthalein reading below normal, with a slow appearance time, and a reading in the second hour as large or larger than the first hour, *giving a long flat curve of output, showing that the kidneys take up their function slowly and with difficulty.* The surgeon is not infrequently surprised to find a persistence of signs and symptoms after a careful perineal removal of a very large prostate, because he has neglected the last but most important step of enucleating this tiny extra-prostatic lobule.

In suprapubic operation this lobule is usually removed with the prostate. It has been argued theoretically that in the anatomically correct enucleation of Bently Squier such an enlargement might possibly be passed outside of and missed by the operator's finger, through the very fact of adhering to the natural plane of cleavage. But I do not think this is so, practically, from the very fact that the ducts empty into the floor of the urethra just proximal to those of the middle lobe with no sharp line of demarcation between them, making it almost impossible to miss them by this method.

Intrinsic hypertrophy of the trigone itself is rare. The writer has four cases, one in which the trigone was three inches in height, giving a typical hour glass bladder. This was divided through the urethra by a specially devised instrument.

Fibrous thickening of the floor of the urethra at the region of the internal sphincter is easily recognizable through the cystoscope as a sharp clearly defined crescentic ridge, and is one of the commonest causes of obstruction in young men, barring the enlargement of Albarran's gland, just spoken of.

In this study I have omitted carcinoma of the prostate, for carcinoma as proved years ago by Geraghty and Boyd, practically never begins anywhere but in the posterior lobe (or more properly lamella) of the prostate, and by the time it has invaded the bladder neck, the diagnosis is made with shocking ease, by the finger in the rectum.

In all of these cases of obstruction the one great point never to be lost sight of is—*what are the kidneys doing in the face of this long continued back pressure?* We are all of us prone to consider the immediate facts in hand, often overlooking the effect higher up, on these most sensitive and delicate glands upon which the major portion of our fluid elimination depends.

Long continued obstruction then means back pressure sooner or later, dilated ureters, either from hydrostasis, or from direct infection of the ureteral mucosa, with ureteritis and regurgitation of fluid, a distension of the pelvis of the kidney and a hydronephrotic pressure on the parenchyma until often nothing is left but a shell of cortex. That is happily not the rule. Usually when the case presents itself, the function is low, but not in any way incompatible with life. *When the function is low, the great danger is in relieving the bladder pressure too suddenly.* A most careful pre-operative treatment is here necessary.

Whatever be the type of therapy employed, the end result to be sought for is a sign of willingness on the part of the renal parenchyma to react kindly to the change in pressure, brought about by the sudden institution of an inlying catheter regime. Usually the patient has been passing the catheter every six hours himself. This leaves quite a back pressure in the hours immediately preceding catheterization. After prostatectomy the pressure will presumably be removed. The only way then to ascertain what the kidneys will do on this sudden relief of long continued pressure is to institute continuous drainage, studying daily the change in urea concentrating capacity, as well as the tubular function. (Urea concentration may best be studied by the new Soy bean fermentation test of Marshall, and the

best colorimetric estimate of daily increase of tubular activity is undoubtedly to be had by the use of phenolsulphonphthalein). *It is not here a question of the actual values but of the relative daily rise in elimination.* If, under treatment, the function increases ever so slightly with inlying catheter there is little danger of complete suppression whatever other condition may supervene. A phthalein reading of 15 per cent. the first hour and 10 per cent. the second, increasing to 25 per cent. the first hour and 15 per cent. the second, has proved, by recent experience, to offer a suitable ground for operation, if urea concentration is good.

By whatever route, however, we decide to approach the gland, it should always be remembered that the act of prostatectomy is only one step in the procedure. Exhaustive diagnosis, careful choice of procedure with due regard to all contributing factors, infinite care in technic and a minute pre-operative and post-operative study of physical and chemical equilibrium; these are the steps which, aside from adventitious circumstance, spell success or failure, and which, if carefully considered in their bearing upon each case as an individual problem, will still further reduce the mortality in operations in this important area of the body.

#### CONCLUSIONS.

In conclusion the facts to be considered are:

1. In cases of retention either partial or complete—examine the prostate per rectum—this should be a part of every examination on the male.
2. If the prostate seems normal, cystoscope the patient and carefully differentiate the condition at the bladder neck, for upon this diagnosis and the above rests the choice of proper operative procedure.
3. No operation for removal of the prostate or for relief of obstruction at the neck of the bladder is complete until the floor of the urethra at the internal sphincter region has been thoroughly examined and any irregularity in its surface removed.
4. Consider always the power of the kidneys to react under relief of pressure, remembering that a low phthalein means bilateral involvement.

With these methods well in hand, and a normally careful post operative handling, we can reduce the statistics collected by Sherck of 25 per cent. mortality in these operations to 4.77 per cent. as given by Squier for suprapubic prostatectomy, and 3.5 per cent. as presented

by Young for the perineal route, a striking difference and well worth our profound consideration.

1001 David Whitney Building.

#### PERIPHERAL NERVE DISEASES AND THEIR TREATMENT.

ELIZABETH BENTELE, M.D.  
DETROIT, MICH.

The peripheral nerve diseases not being exhaustively studied and classified, I shall consider neuritis first and take Osler's definition as a basis, upon which I shall endeavor to frame a clearer picture of and prepare a better understanding for these and allied conditions.

Osler says:

"Multiple neuritis, peripheral neuritis and polyneuritis are the terms applied to a group of diseases which are due to affections of the peripheral nerves, or rather of the peripheral motor and sensory neurons. These conditions are distinguished from paralysis limited to a nerve, or a group of nerves in close anatomical relation, by the fact, that several nerves are affected simultaneously or in rapid succession (therefore multiple neuritis), that the condition is always bilateral and more or less symmetrical, and that the longer fibres of the nerves, which extend to the periphery of the limbs suffer more severely than the shorter fibres which are distributed to the proximal segments, or to the muscles and sensory structures of the trunk (therefore peripheral neuritis). The disease is characterized by the fact that it is limited to the peripheral neurons, while the central nervous system is intact, or any changes which may occur in it are merely a coincident effect and of no significance in the production of the clinical picture.

"The term neuritis would indicate that the condition to which it is applied, is an inflammatory process, but this is not so in multiple neuritis. As a rule, little or no evidence of inflammation can be found in the affected nerves, even in the severest types, and where there is inflammation, it probably only represents a reaction of the connective tissues to the degeneration of the nerve fibres, or the result of an attempt to remove the products of degeneration of the parenchyma of the nerves, due to the direct action of a poison or other noxious agent on them, is the primary and essential change."

Osler gives three different classifications, one according to the pathology, the other by the clinical symptoms, the third as to the etiology. The two last ones are not satisfactory and rather confusing.

Osler describes two pathological types:

1. In the primary and essential process is a degeneration of the parenchyma or functional portion of the peripheral nerves.
2. In the other it is an inflammatory or simple



hypertrophic process of the connective tissue in which the fibres are ensheathed.

We will have to consider these two types more closely, for it is upon the pathology of neuritis that the Cornelius treatment, of which I shall speak later, is built up.

The first type of cases represents those in which the parenchyma or functional portion of the peripheral nerves undergoes a process of degeneration. As Osler says, no poison will cause such a condition after one dose, but a repeated and strong enough action of it is required.

Then, there must be two distinct stages in the course of the disease. The first stage will be marked by the symptoms due to the influence of the poison before it reaches the point of causing degeneration of the axis cylinder, for there must necessarily be some changes preceding this process. The effects of small amounts of any irritating substance when brought in contact with tissues are: Hyperemia, swelling, softness of tissue. This is exactly the picture found in acute cases of neuritis, according to Osler. The nerve appears red and swollen, there is hyperemia of the sheaths. The swelling is due to effusion of serum into the sheaths, the nerve feels soft to the touch. Such a pathological picture may be brought about by any poison, toxins, bacterial invasion or by mechanical irritation as severe strain and overwork, or by exposure to wet or cold. The main symptom of this preliminary stage will be: Severe pain, no matter what the cause or the nerves involved, be it torticollis, where the effusions are in the occipital and cervical nerves, or lumbago with the same affection of the lumbar nerves, or sciatica or multiple neuritis of any kind.

Also the pathology of this stage will be similar for both types, the parenchymatous and interstitial, though there will be a difference in severity and duration, according to the cause.

While under bacterial invasion the first stage may be one of hours, the nerve being destroyed quickly, it will take weeks or months in metabolic or alcoholic poisoning, before the axis-cylinder is affected, and if cold or strain are the cause the process will in the majority of cases be confined to the interstitial connective tissue and only occasionally will a very severe and long continued case lead to partial degeneration of the nerve fibres.

As soon as degeneration of the axis-cylinder sets in, there is a complete change of symptoms; the pain disappears, muscular function is lost

and so are the reflexes and atrophy of the muscles begins.

In the parenchymatous type of neuritis, the sensory symptoms are preliminary, of comparatively short duration, then disappear entirely and give way to motor symptoms, which constitute its most pronounced feature. It is a self-limited disease and regeneration starts from the neurilemmal sheath and its nuclei and the duration is from six to twelve months.

The second type, the interstitial neuritis, is not of a destructive but rather of a productive nature. Here, as in the first type, we find that the disease may have either an acute or chronic course, or we encounter quite frequently cases, in which there was an initial acute attack, which quieted down and became chronic—only to return to active condition under sufficient provocation.

It is not surprising that the medical literature shows few contributions to the pathology of interstitial neuritis, as the patients do not die of it and as its most pronounced symptom is that of pain, a symptom of less interest to the physician than the patient.

In 1905, Dr. T. Ramsey Hunt of New York published an article in the "*American Medicine*," entitled "Contribution to the Pathology of Sciatica," in which he reviews the post-mortem findings of eleven cases of sciatica reported in literature up to that time and describes one case of his own. Among these eleven cases are only two microscopic examinations, which are reported as negative. In eight cases the nerve was found to be enlarged, reddened and edematous, in the case of Gendrian in the year of 1826 a sanguinolent edema within the nerve sheath is described, the fluid of which could be expressed at the cut end.

In his own case Dr. Hunt finds the nerve enlarged in parts, due to an exudate of gelatinous character in the perineural areolar tissue and fat. The microscopical examination is negative, only the perineural connective tissue of the individual nerve bundles is found thickened and coarse.

The differences in the gross pathology of the nerve have probably their origin in the difference of duration of the disease at the time of the autopsy. In the earlier cases the swelling and redness are more pronounced, the exudate more fluid, while later on it thickens and the congestion lessens and still later the exudate is absorbed or organized and in time the whole nerve shows a shrunken appearance.

These findings in sciatica doubtless hold good

for all other nerves showing the same symptoms.

The clinical picture of the interstitial type is that of pain in all degrees leading finally to disability and contractures.

It is this class of patients, to whom we want to bring relief in a more efficient way than we have been able to do thus far. My experience in treating chronic neuritis during the last six years has taught me a number of things. First of all that it is not easy to make a correct diagnosis.

There are a number of conditions, which are not recognized as being due to neuritis and are given names which do not refer to their nature but tend to increase the difficulty of diagnosis.

Dr. Hunt speaks in his article about a neurotic or pure neuralgic form, in which pain is practically the sole symptom—but what is the cause of this symptom? For there must be a cause. Pain is also the sole symptom of interstitial neuritis—what, then, is the difference?

The nerve pain in any part of the body not due to neuritis I have found to be caused by pressure on the root or along the course of the nerve, due to bony excrescences, tumors, infiltration tissue, overstretched and relaxed ligaments, etc. We might term these cases neuralgic, because the pain is not due to any pathologic condition of the nerve itself, but hardly neurotic as we associate with the latter a certain kind of mental condition.

Hysteria, too—as in all other diseases—will help to complicate at times the diagnosis of neuritis.

The worst enemy of a correct diagnosis are the obsolete terms of chronic rheumatism and myalgia.

Allow me to quote Osler again. He refers to chronic rheumatism in the following terms:

"It seems well to state that in view of the writer there is no advantage and every disadvantage in the use of the term."

And again:

"The use of the word 'rheumatism' to describe any form of ill-understood pain—muscular, arthritic, synovial, or neural—is a diagnostic sin, for which no good word can be said."

About myalgia Osler says:

"Under this term, or the unsuitable one of muscular rheumatism, are grouped a variety of conditions but little understood, and which have perhaps in common only the symptom of pain. These are comparatively frequent in occurrence, vary greatly in severity and acuteness, and for the present have to be regarded as difficult of explanation. The acute forms we see especially as torticollis or lumbago. The more chronic forms are associated with more

or less pain and at times with varying degrees of disability and stiffness. The essential nature of the condition is in doubt."

It is not in doubt for any one who knows how to locate pain and finds the painful points in lumbago along the course of the lumbar nerves and in torticollis along the cervical nerves. About the pathology of myalgia Osler says:

"There is a serous exudation in the affected parts, which later may be followed by proliferation of the fibrous tissue. This may be absorbed entirely, but if long continued will be more or less permanent and may extend over a considerable area."

I beg you to notice, that the pathology given by Osler is exactly the same as that of interstitial neuritis, in fact, it is a neuritis of the lumbar, resp. cervical nerves. If we understand clearly the pathology of these cases, we will also see, that only a treatment, which promotes and encourages absorption, can cure these cases, and that if absorption does not take place or is incomplete, the formation of connective tissue will necessarily follow and the condition will become chronic.

There is still another condition, I want to mention, which has frequently been discussed of late by English authors, which they call "fibrositis" and describe as fibrous nodules in the muscles. These nodules vary from the size of a pinhead to a hazelnut and are most frequent in stout people. They are harmless and cause no symptoms, unless they enclose a nerve or press on it, and then the symptoms are identical with those of interstitial neuritis and yield to the same treatment. Certain nerves will sometimes resemble a string of beads, so beset are they with nodules.

In all these conditions the main symptom is pain and pain is a subjective symptom of very doubtful value to the physician. If we could find a way of proving to our own satisfaction that there is pain, and where it is, we will have found a means of throwing light on a number of conditions, which so far necessarily proved to be confusing.

Dr. Cornelius, one of the professors at the Berlin University, originated some twenty years ago a method which is equally efficient for purposes of diagnosis as well as treatment. He uses deep pressure over the nerves, which will elicit tenderness in case of inflammation. If the pain is due to pressure of a tumor upon the nerve, without implication of the nerve trunk itself, there will be no tenderness, neither do we find pressure pain in cases of central origin, or in hysteria.

On the other hand, if we find tenderness along the course of a nerve, we know there is an interstitial neuritis, even though the patient comes with a diagnosis, self-made or otherwise, of rheumatism, myalgia, or what-not.

The treatment of these different forms of peripheral nerve affections has consisted so far of internal and external medication, injections of alcohol or analgesics into the nerve or in surgical procedures. It is not my object here to discuss the advantages or disadvantages of either of these procedures; I think we all are familiar with the reports of those men, who have had an extensive experience in their line of work. I rather shall give you briefly an outline of Dr. Cornelius' method in handling these cases.

Let me recapitulate, that the pathology in the early stages consists of a sero-sanguinous, resp. gelatinous exudate within the nerve sheath, and in the later stages of an increase of the interstitial connective tissue through organization of the early exudate.

The logical treatment would therefore be the one which promotes absorption in the acute cases, and loosens the adhesions in the chronic cases. This is exactly what Dr. Cornelius does by manipulating the nerves, in both instances by deep pressure.

To describe the treatment so that anybody could apply it, seems to be difficult. It has to be studied in the clinic on a large and varied number of patients, under different conditions. The nerves are not uniformly involved, but only at certain points—called nerve-points—which frequently are smaller than a pin-point and easily missed or overlooked. Also the amount of pressure made, has to be carefully graduated according to the individual case, as patients react very differently to the treatment. Severe pressure in an unsuitable case will cause the most alarming after-effects and your patients will never come back for treatment. On the other hand too light pressure in a case with deeply located nerve points will give you and the patient the impression that there is no neuritis, while the trouble was deeply situated and not reached by the pressure.

The amount of treatments necessary for a cure stands in direct proportion to the length of time the trouble has existed. An acute neuritis of a few days' standing is generally cured by one or two treatments, one of ten or twelve weeks duration with ten or twelve treatments, and a chronic case of several years' standing may require fifty or a hundred or more treat-

ments before it is cured, dependent upon the number of nerves involved and the density of the interstitial connective tissue proliferation.

#### CONCLUSIONS.

To summarize, I should like to propose a simple classification, which would bring many so far ill-understood conditions into their proper relation and give them the place they deserve according to the pathological findings.

#### DISEASES OF THE PERIPHERAL NERVES.

##### I. Neuritis.

(a) Parenchymatous—in which the motor symptoms are most pronounced, preceded by a short period of sensory phenomena.

1. Neuritis due to poisons introduced into the body from without;

Inorganic substances like lead, arsenic, etc.

Organic substances as alcohol, sulphonal, etc.

2. Neuritis secondary to diseases producing toxins within the body as in diphtheritis.

3. Neuritis due to the invasion of the peripheral nerves by bacteria as in leprosy or by pyogenic bacteria.

(b) Interstitial—in which the sensory symptoms are most pronounced, including sciatica, lumbago, torticollis and cases of so-called chronic rheumatism.

Causes: Trauma, strain, overwork, exposure to cold and dampness, autointoxication, or it may be secondary to diseases as: anemia, tuberculosis, syphilis, malignant diseases, peripheral arteriosclerosis.

##### II. Neuralgia proper.

A nerve pain not produced by neuritis but by pressure from without upon the nerve (tumor, exudate, bone, etc.).

##### III. Neurosis.

Comprising functional disturbances without pathological basis.

#### TREATMENT OF ASTHMA AND HAY FEVER BY ACTIVE IMMUNIZATION.\*

R. S. MORRISH, M.D.

FLINT, MICH.

In the specific treatment of asthma and hay fever, it is essential to have a clear understanding of the etiological agent and the nature of its action upon entering the body. It is now considered sufficiently proved that the pollen of certain plants is the causal factor, a cell unit, differing from all cellular micro-organisms that cause infectious diseases, by entirely lacking the faculty of multiplying within the host.

"June Cold," or the spring variety of hay fever is due to the type graminaceae, or the common field grasses, while patients who suffer

\*Read before the Genesee County Medical Society, March 23, 1915.



from autumnal fever, are susceptible to the pollen of dicotyledones, such as: ragweed, oxeye daisy, goldenrod, and Indian corn. Autumnal fever is the most common in the United States, and occurs from August to October or November. During this season of the year, pollen reaches the nasal mucous membranes of all persons, only a small proportion, however, are affected, and this individual susceptibility is evidently due to a parenteral proteolysis as first suggested by Weichhart, and by Wolff-Eisner. The poisonous principle has been found to lie in the albuminous part of the pollen protein, and is specific only within the limits of a group reaction, i. e. it is not a true toxin, but acts as a sensitizer, and as a poison to individuals subject to the disease.

The disposition to hay fever may be inherited, or it may be acquired during any period of life. It is altogether probable that most cases are acquired, as the disease rarely appears before the fifth year, and undoubtedly is greatly dependent upon the permeability of the nasal mucous membrane.

The treatment to be described, consists of increasing the tolerance for pollen protein by active immunization, through the hypodermic injection of a pollen extract. The first published account of scientifically conducted experiments on this treatment appeared in 1911, by Noon and Freeman, of Wrights laboratory in London, while about the same time, Koessler conducted similar independent experiments in this country. The technic of the latter has been followed by the writer with the exception of a few minor details.

Most patients in this locality react to ragweed and goldenrod, and for those who showed such reaction, a pollen extract was prepared from these plants. One cgm. of pollen was ground up as finely as possible in a mortar, a small amount of sterile sea sand being added to better accomplish the grinding. To this was added 10 cc. of a sterile normal salt solution, and the suspension well shaken and kept at 37° C. for eighteen hours. After a second shaking, the extract was centrifuged and the supernatant fluid drawn off, and kept as a stock solution. This concentrated pollen solution, which was a 1-1,000 dilution was found to be more stable, when kept on ice, than were those of higher dilution. Phenol 0.25 per cent. was added as a preservative.

A unit of pollen toxin has been adopted in order to properly grade the dosage. The 1-100th part of a millionth of a gram of pollen

protein has been arbitrarily designated as the unit, or one U  $P=0.000,000,01$  gm. As an example, one cc. of a 1-100,000 dilution would contain 1,000 units.

In all cases the initial dose should be small and gradually increased, but must be kept somewhat below the patient's tolerance. The cases to be cited later were started on 50 units and the dose increased at each subsequent injection; none of the patients could be given more than 750 units without responding with a severe reaction. These overdoses are to be avoided as they lower the resistance rather than immunize. The most favorable results were obtained by giving frequent injections, as on every second day.

Eleven cases were seen during the fall of 1914, none of whom presented themselves for treatment until the attacks were well established. All had suffered attacks for many years and might well be classed as severe cases, and were found to have an involvement of both the nasal and tracheobronchial mucous membranes, except one, who showed simply a severe rhinitis. Of the cases treated with pollen extract, one received no benefit whatever, and was subsequently placed upon injections of adrenalin chloride solution. Two were made subjectively better. Another made marked improvement for three weeks, and then took an automobile trip of several days, a test that very few of this type of disease could withstand. Following this trip the patient suffered severely, and his resistance to pollen could not be increased to any appreciable amount. The remaining seven cases improved both subjectively and objectively; in three, the symptoms disappeared entirely for the rest of the season, while in the others the attacks were less frequent and of a mild degree of severity.

Inasmuch as rather remarkable results seem to attend the use of pollen toxin during the active stages of hay fever, it would only seem reasonable to believe that much good should arise from its use before the pollen appears, as has been suggested by other writers. In this way the patient would be well fortified against an attack. Pollen from plants that grow in the same vicinity in which the patient lives should be used when possible in the preparation of the toxin, as they are the varieties to which he is sensitized, rather than those of another place. This fact may often be noted by the frequent improvement in symptoms on the change of place of residence, and a new variety of pollen is encountered.

## CONCLUSIONS.

1. In concluding, it might be well to reiterate briefly what has already been brought out; that the results of a number of workers seem to quite conclusively show that hay fever is a type of anaphylaxis due to the pollen of certain plants; the susceptibility being largely dependent upon the permeability of the nasal mucous membrane.

2. The sensitization is most marked toward the pollen in the vicinity in which the patient lives, making it imperative that the pollen toxin be prepared from plants in the same locality, in order that treatment may be offered with a toxin toward which he is most susceptible.

3. As the purpose of treatment is to increase the resistance toward the toxin of pollen, it would seem very desirable to give treatment prophylactically, rather than during the active stage, when possible. Personal experience, however, has shown very encouraging results in severe cases well advanced into the season.

Pollen toxin is not a stable product, and must be sterile always, and of a uniform potency. Even though kept on ice, a fresh solution should be made every eight to ten days to avoid the possibility of unpleasant symptoms.

The Dryden.

## INFECTIONS OF THE HANDS.\*

W. T. DODGE, M.D.  
BIG RAPIDS, MICH.

Infections of the hands are subject to all of the conditions involved in infections elsewhere in the body and in addition to those peculiar to the anatomy of the part. The infecting agent is usually one of the varieties of the staphylococcus, which is a natural habitat of the skin.

Wounds of the hand are usually either lacerated or simple punctured wounds from splinters of wood or iron. The simple punctured wound received from splinters of wood sometimes result in most disastrous consequences, because they are never seen by a surgeon at the time the wound is received and when they come into his hands the infection has ordinarily traveled a considerable distance along the lymphatics.

The symptoms produced in the course of the infection depend upon the virulence of the infecting agent and upon the general condition of the patient, so far as his resisting power to infective process is concerned. This in a gen-

eral way may be determined to some extent by the blood count. In the presence of an active infection the white cells should number from twenty-five to thirty thousand, but in the cases that are doing badly the white cell count will be found small and in such conditions benefit may be expected from the administration of vaccines. The ordinary treatment of infective processes elsewhere in the body is applicable to infections of the hands, but in order to carry them out properly a thorough knowledge must be had of the anatomy of the hand and especially of the location of the spaces in the hand and the best means of reaching those spaces.

Infections spread by means of the lymphatics and by means of the tendon sheaths, and in some forms of infection a predilection seems to be had for the tendon sheath route. In my experience these forms of infection have been the most difficult to deal with.

The location of the various spaces in the hands has been worked out by Kanavel of Chicago and has been described by him.<sup>1</sup> As a result of his investigations he states the following general facts.

"1. There are certain well-defined, uniform spaces upon the fingers, palm, and dorsum of the hand in which pus can accumulate.

"2. There are definite anatomical channels by which infection arising in a given spot will extend to certain of these spaces, while certain other spaces will remain uninvolved; hence the diagnosis of the position of the pus is simplified and the proper site for the incision determined.

"3. There are definite anatomical channels by which pus can spread from the uniform spaces mentioned, and when this occurs, the position of the pus can be prognosticated.

"4. The boundaries of the fascial spaces having been determined, it is readily seen that in some of these the incisions for evacuation must be made at definite spots; otherwise important structures may be injured, or by ill-advised incisions adjacent spaces may be opened at the same time and a spread of the infection favored to parts of the hand that would not have become involved without this unfortunate surgical procedure.

"5. It can be readily understood why, in certain cases, the infection has persisted for weeks and months after apparently opening the pus pocket, since diverticula and intermediary chambers have not been taken into consideration."

Quoting further from this article we note that he demonstrates five great spaces as follows:

"First, the dorsal subcutaneous, which is an extensive area of loose tissue, without definite boundaries, allowing pus to spread over the entire dorsum of the hand.

\*Read before Ionia County Medical Society, May 12, 1915.

1. Surgery, Gynecology and Obstetrics," volume No. I, p. 221.

"Second, the dorsal subaponeurotic, limited upon its subcutaneous side by the dense tendinous aponeurosis of the extensor tendons, upon the deep side by the metacarpal bones, having the shape of a truncated cone, with the smaller end at the wrist and the broader at the knuckle. Laterally the aponeurotic sheet shades off into the subcutaneous tissue.

"Third, the hypothenar area, a distinctly localized space.

"Fourth, the thenar space, occupying, approximately, the area of thenar eminence, to the flexion adduction crease of the thumb, not going to the ulnar side of the middle metacarpal. It should be remembered that this space lies deep in the palm, just above the adductor transversus.

"Fifth, the middle palmar space, with its three diverticula below along the lumbrical muscles, limited by the middle metacarpal bone upon the radial side, overlapped by the ulnar bursa upon the ulnar side, and separated from the thenar space by a partition which is very firm everywhere except at the proximal end, where it is rather thin. A small isthmus can be found leading from the proximal end of the space under the tendons and ulnar bursa at the wrist up into the forearm."

Recognizing the presence of these great spaces we have to consider the means by which infection reaches each of them and also the effect of the infections traveling along the tendon sheaths. "From the index finger it may spread along the subcutaneous tissue to the back of the hand then come to lie in the cellular spaces and the web between the index and middle fingers, and could spread along the lumbrical muscle of the middle finger into the palm and thus reach the middle palmar space. Upon the radial side of the index finger the pus would probably come to the surface. If the pus were under the dorsal aponeurosis of the proximal phalanges, it would be limited to this area since it is a closed space and does not communicate with the subaponeurotic area upon the dorsum of the hand. However, a metacarpophalangeal arthritis may develop with destruction of the bone and ligaments. Extension then becomes possible into the thenar space.

From infection of the thumb the pus may enter the thenar space, but that result is not very probable as there is no direct connection and the tendency of the sheaths is to carry the pus in other directions. If the infection is of the connective tissue spaces, it could spread along the ulnar side of the thumb and by considerable destruction of connective tissue finally invade the space. Should the infection be upon the back of the thumb the pus would extend more easily into the dorsal subcutaneous tissue of the thenar area.

#### THE SPREAD OF INFECTION INVOLVING THE MIDDLE FINGER.

Extension from the synovial sheath at its proximal end in every case will extend into the middle palmar space after rupturing through the connective tissue, separating it from the space. Should the infection be a deep-seated accumulation of pus in the cellular tissue upon the dorsum, it could spread subcutaneously upon the back of the hand, upon the radial side. Osteomyelitis, involving the metacarpal bone, would tend to invade the middle palmar space in front, and the subaponeurotic dorsally.

#### THE SPREAD OF INFECTION INVOLVING THE RING FINGER.

Here infection leads through into the palmar space if any delay occurs in evacuating the pus when it first forms in the finger.

From the little finger the infection may spread along the lymphatic channels and connective tissue spaces from the inner side of the finger into the middle palmar space. On the outer and dorsal side they would tend to lead into the subcutaneous tissue externally.

The various spaces then may be infected from the following sources:

The middle palmar space would receive infection from the middle finger, ring finger, and radial side of the little finger, with its synovial sheath.

The thenar space would become involved from the index finger and the ulnar side of the thumb.

The Hypothenar space would become involved in an osteomyelitis of the fifth metacarpal.

The subaponeurotic space would become involved by an osteomyelitis of the middle and ring finger metacarpals particularly and at times from the little and index metacarpals. Lymphatic abscesses along the deep dorsal vessels would also lie under this sheet of tissue. The dorsal subcutaneous space communicates freely with the fingers and the thumb."

Should the diagnosis of a localized accumulation of pus in any of the various tissues be made, we naturally ask what is the best site for incision, for we need not discuss the proposition that such a condition as that demands early and efficient drainage. Should the subcutaneous tissue of the dorsum or the areas under the epidermis or derma of the palm be involved, or those minor infections of the thenar and hypothenar areas be present, a wide opening by simple incision is generally sufficient. Should the middle palmar, thenar or suba-



poneurotic spaces be involved, however, some special consideration is necessary. The opening of the middle palmar space is a grave responsibility; the diagnosis is difficult, and upon the other hand the danger of delay is great. Any method of opening the space exposes certain tissues to injury and it is a question of choosing the least dangerous route.

The best method is that of through and through drainage from palm to dorsum. The incision should be made into the metacarpal space between the middle and ring finger, at a point where the middle palmar crease crosses the metacarpal space. Making a cut here through the palmar aponeurosis and then forcing a pointed artery forceps through to the dorsum, being careful to rupture the dorsal aponeurosis freely, we draw through a large, perforated rubber tube.

In the thenar area the drainage should also be through and through from palm to dorsum. The palmar opening should lie to the ulnar side of the muscular body, emerging on the dorsum at about the level of the metacarpo-phalangeal articulation of the thumb, midway between the two metacarpals. A rubber drainage tube should be used.

If the subaponeurotic space be involved we should remember that the tendons proper in the lower part of the dorsum overlie the metacarpal bones, except the tendon going to the little finger; consequently our incision should lie over the interosseous space.

If the infection has spread up under the annular ligament into the forearm, the pus will lie beneath the tendons and the best method of emptying this abscess would be to go laterally, just anterior to the radius, about three inches from the wrist. After making the skin incision, an artery forceps is pushed through the deep tissue, going between the flexor profundus tendons and the bone. Should the cavity be opened a wide incision can be made, and the pus evacuated through one opening, or through and through drainage can be instituted, the tube passing just above the ulna.

After all these incisions the application of warm antiseptic solutions is indicated. I am in the habit of using Ochsner's solution, the formula of which is as follows:

Alcohol .....	2	Oz.
Carbolic acid .....	1	Oz.
Glycerine .....	1½	Oz.
Saturated solution boracic acid Ad...	2	pints

In the treatment of wounds of the hands, no matter how insignificant, it is important that

strict antiseptic precautions shall be adopted at once. In one splinter case resulting in death in my hands last year, a representative of the Industrial Insurance Company, in which the employers were insured, informed me that their company paid out more money on account of sliver wounds of the hand than from all other causes combined. This company is engaged exclusively in the insurance of men employed in wood-working industries.

Punctured wounds should generally be enlarged and I believe should be thoroughly swabbed out with a 5 per cent. solution of iodine. If all could be seen when the wound is first inflicted, by a competent surgeon, and the wound dressed according to antiseptic principles, it is probable that no serious consequences would ever arise in these cases, but these slight wounds are ordinarily attended to by the patient himself, or by his friends in the factory, and the result is that two or three days afterwards when they come into the hands of the surgeon, the infective process is already firmly established. More severe wounds are, of course, sent to the surgeon at once and we seldom have serious trouble from infections in this class of injury.

I have been so unfortunate as to have had two severe cases of infection of the hand during the past twelve months. Both of them were simple punctured wounds from a splinter of wood. Both were seen by me two days after the injury, the splinter having been removed in each case by the patient at the time of the injury. Two days later patient suffering considerable pain he concluded to consult a surgeon.

The first case, which resulted in death from pyemia, I opened under antiseptic precautions very freely, two days after the injury when I first saw him. I discovered no pus. The extension of the infection in this case was by means of the lymphatics and tendon sheaths, and I neglected to make the opening sufficiently deep to reach the tendon sheaths. Warm moist antiseptic applications were made and for two days the patient did very well. His pain then returned and on that account I administered an anesthetic and made a very thorough opening at the point the infection entered, and upon the dorsum of the hand where the pain was most pronounced. Although thorough exploration was made in this case no pus was discovered at that time and supuration did not begin for several days subsequent to the exploration. It then, however,

suppurated very freely and extension occurred along the tendon sheaths with considerable rapidity. Dr. Hutchinson of Grand Rapids, was consulted in the case at this period, and gave the opinion that the openings had been made as thoroughly as it was possible to do. Nevertheless the progress of the patient continued from bad to worse. General pyemia developed with secondary abscesses in all parts of the body and he died in about three weeks from the time of receiving the injury. Culture demonstrated that the infecting agent was the staphylococcus aureus.

The second case, which occurred last fall, was the same kind of an injury and came to me two days following the injury complaining of the same symptoms as the previous patient; intense pain at the base of the thumb, where the splinter had entered, but without the presence of pus. Largely on account of the intense pain the patient was complaining of, which could not be accounted for by the physical appearance of the parts, I placed him in the hospital and made very free incisions and established through and through drainage through the thenar space. Improvement, however, did not occur at once. The infection spread along the tendons into the dorsum of the hand, subaponeurotic space and upon the tendons to the arm above the wrist. All these various spaces were opened freely, sometimes operations being done every day for a period of four days. The patient's hand and arm were kept in continuous bath of warm antiseptic solution. For hours at a time it was kept in a tub immersed in such solution. Nevertheless for a period of two weeks the infection spread as persistently as in the fatal case previously described. Culture showed that the infecting organism was the staphylococcus aureus. Blood count showed but ten thousand whites. A vaccine was made and administered and the blood count gradually increased until after the third dose of vaccine was administered the white cells increased to twenty thousand. From that time an improvement was observed in the condition of the patient and he finally made a very good recovery, though with somewhat impaired functions of the hand.

The history of this case confirms the opinion I have formed, that lack of resisting power in the patient is largely responsible for these persistent and progressive infections, especially when the case is subjected to early and vigorous treatment.

To sum up then, we should treat all infec-

tions of the hand as promptly as possible and with vigorous antiseptic measures. No punctured wound, especially if it has extended deep into the hand, should be permitted to leave the office without converting it into an incised wound and treating with radical antiseptic measures. Our factory people should be educated to the point of sending their splinter cases to the surgeon at once. The practice of the operatives taking out their own splinters, probably with a dirty knife, is very bad and so long as it is persisted in will lead to many damaged hands and to occasional deaths.

---

### CLINICAL EXAMINATION OF THE FECES.

C. B. LOCKWOOD, M.D.  
DETROIT, MICH.

Probably the most neglected of all our modern methods of investigation is the examination of the feces, therefore no apology is offered for the presentation of this subject. The enormous value of such an examination and the knowledge which it gives us of gastrointestinal functioning, together with its neglected use makes it a subject which cannot be brought too frequently before the eyes of the practitioner of medicine.

Gastro-intestinal pathology more than any other department of medicine shows the influence of nonhygienic living, worry and the strenuousness of modern life. It is therefore of greatest importance to determine the difference between functional and pathological diseases of the digestive tract since the knowledge determines the therapy.

Many efforts have been made to elaborate a method of clinical examination of the feces whereby reliable information could be obtained regarding disturbances of the intestinal digestion. To Schmidt must be given the credit of devising such a method. By the use of his diet, which will be described later, fairly reliable information can be obtained concerning the power of the intestines to digest certain articles of diet.

In normal individuals one to two bowel movements daily is the rule; exceptions may be made to those where absorption and assimilation is so complete that very little residue is left and a movement occurs every other day, and vegetarians who may move oftener than twice a day.

The normal stool has a cylindrical form and

a pulpy consistency. A stool deposited in the form of one massy cylinder, dry in consistency, indicates atonic constipation. If they have the consistency and form of sheep feces (scybalæ) it indicates obstinate constipation, either anatomical or functional. Ribbon-like stools point to spastic constipation or stenosis.

The odor is normally due to scatol. A more offensive odor is due to excessive decomposition of proteids. It is still more offensive in enteritis. A stool with a sour odor points to a disturbed carbohydrate digestion.

The color of a normal stool depends upon the food eaten. Usually it is dark brown, but on a vegetable diet it is of a lighter shade. Iron and bismuth give a black stool; santalin, rhubarb and senna give light yellow stools, cocoa, brown. Calomel produces green stools due to the increased peristalsis which allows no chance for the bilirubin to be converted into hydro-bilirubin. For the same reason green stools may be found in diarrhea, or they may also be due to the chlorophyll of certain vegetables.

Alcoholic stools are due to the presence of an excess of fat, either because of the ingestion of large amounts, or on account of a disturbance in the function of the liver or pancreas, which would prevent the normal splitting of the fat and proper absorption.

Blood in the feces may change the color according to its origin and the amount present. Swallowed blood, or blood from a gastric or duodenal hemorrhage, if in large amounts, produces a black tarry stool, while in smaller amounts produces a brownish color according to the amount present. Small amounts may be present in a light colored stool and are best detected chemically. Blood from the large bowel is bright red and more or less mixed with the stool according to the distance of the bleeding point from the anus. With hemorrhoids, rectal ulcer, or carcinoma the stool may be merely streaked with blood on the surface.

Mucus is present normally in small amounts. In larger amounts it indicates an inflammatory condition of the mucous membrane of the intestine with the exception of the small shreds often seen on the surface of the scybala, and in colica mucosa where large shreds are thrown off at intervals. This condition is thought to be a functional hypersecretion. Large pieces of mucus originate in the large intestine. Minute specks of mucus mixed in a liquid stool indicates the inflammation is in the small intestine. To confirm this, broken up cells, nuclei,

or food particles should be found imbedded in the mucus on microscopic examination. Mucus if bile stained indicates disease of the small intestine, and if colorless catarrh of the large intestine or lower part of the small intestine is present.

Pus may be present in tuberculosis of the colon, and in malignant growths it generally occurs in connection with blood.

Parasites should be looked for, such as segments of a tape worm, *ascaris lumbricoides*, *amebæ coli*, *cercomonas intestinalis*, *trichomonas intestinalis*, etc.

#### FUNCTIONAL EXAMINATION OF DIGESTION BY MEANS OF AN INTESTINAL TEST DIET.

The Schmidt diet may be given in the hospital or home if a nurse is in attendance on the case, but for the average run of gastro-intestinal cases as seen in the office or clinic it is rather impractical. With this in mind I have been using for some time a diet which conforms to his, both in the number of calories and in the proportion of the different food present. It is easy to obtain and may be taken by the patient at work or business as well as in the hospital or home. The intestinal test diet that I have urged is as follows:

- 2 soft boiled eggs.
- 2 glasses of milk.
- 1 oz. toast.
- ½ oz. butter (2 large squares).
- 2 oz. oatmeal.
- ½ oz. sugar.

#### Noon:

- 4 oz. chopped beef (rare).
- 6 oz. mashed potatoes.
- ½ oz. toast.
- 2 glasses of milk.
- ½ oz. butter.

#### Night:

- 2 glasses of milk.
- ½ oz. toast.
- ½ oz. butter.

The patient should be kept on this diet for at least three days, then a specimen taken and examined as soon as possible after its passage, both macro- and microscopically.

#### MACRO-SCOPIC EXAMINATION.

This is important and for the general practitioner is often the only method at his disposal. The form, consistency, odor, color, etc. should be noted as above described, as well as the presence of fermentation, mucus, pus, and macroscopic food particles.

#### MICROSCOPIC EXAMINATION.

Three smears are made and examined.

1. The feces alone, where we can see bacteria, yeast cells, crystals, muscle fiber, con-



nective tissue, mucus and the eggs of parasites. Muscle fibers are easily recognized by their yellow color and regular surface. Connective tissue fibers are recognized by their shining surface and tortuosity.

If an excess of muscle fiber, especially with striations present, is found we assume that the digestion of proteids is poor. If the muscle fiber is found unaccompanied by connective tissue the trouble is with the pancreas, but if both are present in excess it indicates that the HCL of the stomach is also diminished or absent as it is the HCL which dissolves the connective tissue and exposes the muscle fiber to the action of the pancreatic juice. If considerable connective tissue is found alone it suggests that there is a diminution or absence of hydrochloric acid in the stomach.

2. Feces plus a drop of Sudan III sol. plus a small amount of heat. The Sudan III sol. consists of glacial acetic acid 90cc, alcohol 90 per cent., 10cc, and a knife point of Sudan III, as recommended by Saathoof.<sup>1</sup>

The fat droplets are easily recognized by their red color. If large amounts of fat are found it indicates a deficient pancreatic secretion, common bile duct obstruction, or intestinal catarrh. A small amount of fat is normally present.

3. Feces plus Lugol sol.: The starch residue stains blue while the yeast cells stain yellow. An excess of starch in the stool points to a mild disturbance of the small intestine, but when found together with muscle fiber and fat it indicates pancreatic disturbance.

#### CHEMICAL EXAMINATION.

Normally the reaction of a stool, with litmus paper, is weakly acid or alkaline. An increased acid reaction indicates carbohydrate fermentation while an increased alkaline reaction indicates proteid putrification.

#### SCHMIDT'S SUBLIMATE TEST.

A small portion of feces is mixed with a few drops of saturated solution of mercuric bichlorid in a watch crystal, covered, and set aside at room temperature. In 6-24 hours the production of a red color is normal, indicating the presence of hydrobilirubin. A green color, even of microscopic portions, shows the presence of bilirubin and is abnormal, indicating the presence of intestinal catarrh. Absence of any color indicates the absence of the entrance of the bile into the intestine as found in common bile duct obstruction.

<sup>1</sup>. Munch med. Woch., Oct., 1912.

#### FERMENTATION TEST.

A portion of feces is made liquid with water and placed in a Strassburger fermentation tube, put into the incubator and left there twenty-four hours. Normally there is only a slight development of gas, pathologically gas is excessive with a sour odor in cases of carbohydrate fermentation, or an intensely offensive odor in cases of proteid putrification.

#### TESTS FOR OCCULT BLOOD.

Before examining a stool for occult blood it is necessary to place the patient on a diet free from blood i. e. a meat free diet, meaning total abstinence from meat, meat soups, meat extracts, etc. for three days. Neither should any gastric or esophageal instrumentation, such as the passage of a stomach tube or bougie, be done for three days, to avoid even a slight bleeding from these causes. Other sources of blood such as swallowed blood from the teeth, nose, throat or lungs, bleeding hemorrhoids, etc. should be ruled out before concluding that the finding of occult blood means gastric or intestinal hemorrhage. Prunes may also give a positive benzedine test and should be excluded.

The most satisfactory ways of detecting occult blood are the following:

*The Guaiac Test.*—A piece of stool about the size of a marble is rubbed with about 5cc. of glacial acetic acid, after which about 5cc. of ether is added. The test tube is turned slowly up and down to mix the contents and then allowed to stand until the ether comes to the top when it is decanted into another dry tube. One cc. of a freshly made guaiac tincture is now slowly poured down the side of the tube so as to form two layers, and a few drops of  $H_2O_2$  are added. If occult blood is present a blue color will form at the zone of contact. The tube is now shaken and if the test is not too weak the whole contents will assume a blue color, the depth depending upon the strength of the reaction. The blue color disappears upon standing.

Boas has recently modified the test by which he considers it is made more sensitive and reliable. The feces are rubbed up with an acetic-acid-alcohol sol. (acidi acetic glacial, 25; alcohol absol., 75), then filtered; then ten to fifteen drops of a fresh resin guaiac alcohol solution are added without shaking, and fifteen to twenty drops of  $H_2O_2$ . If occult blood is present a dark blue or strongly violet color is obtained.

**Benzidine Test.**—This test is the most sensitive of all and should always be used in conjunction with the guaiac test. A knife point of benzidine crystals is dissolved in a few cc. of glacial acetic acid. One cc. of this is added to the ethereal extract of stool, as in the guaiac test. On the addition of a few drops of  $H^2O^2$  the presence of blood will be shown by a green or bluish color in one to three minutes.

The finding of occult blood in the stool is the most important sign in the diagnosis of gastric or duodenal ulcer. A constantly negative blood test speaks against the presence of a florid ulcer, but not against healed ulcer or its sequelae. It is also the most important early sign in the recognition of gastric carcinoma.

#### TESTS FOR PANCREATIC FERMENTS.

The estimation of the ferment activity in the feces is of value in determining the presence or absence of pancreatic diseases. A breakfast of mixed foods is given followed by an enema, and the administration of 3 grains of calomel plus 5 grains of phenolphthalein. The liquid stool which is obtained in a few hours is filtered and the filtrate used in estimating the ferment activity.

**Trypsin.**—The stool filtrate if not alkaline is made so by the addition of sod.-carbonate and the tryptic activity estimated by the Mett albumin tube method as used for the estimation of pepsin in the gastric juice. The Fuld-Gross casein method may be used.

**Amolypsin.**—A 1 per cent. sol of Kahlbaums soluble starch is prepared on the water bath with considerable stirring for 8 to 10 minutes. Five cc. of this solution are placed in each of nine clean sterile test tubes and the stool filtrate added in amounts giving from 1-10 to a 1,10,000 dilution. The tubes are incubated at 38-40° C. for 24 hours, and then filled to near the top with water, mixed, and one drop of n-10 iodine sol. added to each tube. Incomplete digestion of the starch is indicated by a blue color, and the amount of amolypsin present estimated by the last dilution in which no blue color appears. In a normal case the last tube which shows complete digestion usually runs from 1-500 to 1-5,000.

**Steapsin.**—To 10cc. of distilled water in a small flask are added 1cc. stool filtrate, 1cc. ethyl buterate, and 1cc. toluol. One drop of a 1 per cent. alcohol phenolphthalein sol. is now added and the mixture made neutral with n-10 NaOH. Add water to bring the fluid to 25cc.,

cork, shake and incubate for 24 hours at 40° C. A control is made by using stool filtrate which has been boiled for five minutes. After incubation it is titrated to neutral again with n-10 NaOH. The difference between the amount of free acid which has developed in the control and test flask is taken as an index of the fat splitting ferment present.

It has not been the aim of the writer to make any new contributions to the literature on the examination of the feces, but rather to urge the more frequent employment of recognized methods of study of an excretion which is too often overlooked and will often reveal the true condition of the long suffering patient, resulting in a clearer diagnosis and prognosis and a more rational treatment of the many more or less obscure disturbances of the digestive tract.

603 Kresge Bldg.

#### ABDOMINAL INJURIES.\*

GEORGE H. PALMERLEE, M.D.

DETROIT, MICH.

In discussing the subject of abdominal injuries and referring particularly to those cases not having a wound of entrance, one will find that it is often very perplexing to the most experienced surgeon to determine the right method of treatment in these cases. At first there may be no objective symptoms present which indicate a serious injury. It is important to obtain a careful history of patients who have sustained an abdominal injury. Should there be a penetrating wound, then an exploratory operation is, without question, indicated. Under such circumstances, it is not difficult to decide, but where there is not even a bruise, a scratch of the skin, and often comparatively little tenderness over the site of injury, it requires mature judgment, and it will tax one's diagnostic ability to the utmost, to distinguish between the important, and the unimportant, symptoms. In such a case, the history should tell how the injury was received, whether by a kick from a horse, run over by a wagon, squeezed between the bumpers of cars, falling against a thimber, or being struck by a board from a saw.

It is almost incredible that the intestines are often completely torn across without giving evidence of so serious an injury until hours afterwards. How this takes place is hard to explain but possibly it is due to impingement against the spine or pulling on a fixed point.

\*Read before the Surgical Section of the Wayne County Medical Society, Feb. 22, 1915.

Symptoms of shock are produced by blows over the abdomen and no actual internal injury occurs. Paleness, nausea and vomiting may follow. The injury may be a tear in the mesentery, rupture of the liver, bladder or intestines. Sometimes the opening in the bowel may be very small and plugged by a protrusion of the mucous membrane and is very soon sealed over by the omentum.

The location of the intestinal lesion is most commonly found in the small bowel, occurring more frequently in the ileum than in the jejunum and occasionally rupture is found in the large bowel. Usually the lesion is single.

The rapidity of the abdominal symptoms depends upon the size of the opening, and upon whether or not, the intestinal tract is full or empty. The greater the amount of escaping intestinal contents, the more rapidly will the abdominal symptoms develop. Large tears in the mesentery, with rupture of large vessels, will produce immediate symptoms of hemorrhage and shock, and later the intestine supplied by the injured vessels will become gangrenous. Rupture of the liver will be indicated by hemorrhage, and there may be rigidity and dullness in the right flank. The usual symptoms following an abdominal injury are pain, rigidity of the abdominal muscles, tympanites, vomiting and facies. Often, not all of these symptoms are present, neither do they always appear at once. I will mention, briefly, a few cases which have come under my observation.

1. Laborer, was squeezed between car bumpers and was sent to the hospital.

*Examination* shortly after the injury, revealed all symptoms of shock. Abdomen is somewhat distended and rigid, rapid pulse, pale, anxious expression of the face and pain in the abdomen, but no indication of bruise of the skin at any point.

*Operation.*—Exploratory laparotomy was done at once. There was a small rupture of the liver and the abdominal cavity contained a great quantity of red blood. A search of the viscera revealed no other rupture but the mesentery was torn in numerous places and so profuse was the bleeding that the patient was moribund before the bleeding vessels could be tied and died on the table.

2. Polish laborer, was squeezed against a car frame. He was sent to the hospital.

*Examination* did not reveal any local evidence of injury. Abdomen was a little tender above the umbilicus but no rigidity or distention. Pulse and temperature normal. The patient did not feel like remaining in bed and wanted something to eat and drink. However, nothing was given by mouth. Morphine, gr.  $\frac{1}{4}$ , by hypodermic for pain. About ten hours after the injury, the pulse began to rise; vomiting followed; abdomen became distended and

rigid; a pale and anxious look to the face. When the patient was seen the next morning, he presented a typical picture of a serious abdominal injury.

*Operation* was done immediately. The abdomen contained some blood and a considerable quantity of fecal matter. A hurried but thorough search was made and the small intestine was found torn completely through and a short distance into the mesenteric border. No other injury to the viscera was found. An end to end anastomosis was done but the patient died from shock about four hours later.

3. A boy, 16 years old climbed over the draw bar of a train. A sudden jolt caused him to fall between the bumpers and he sustained an abdominal injury.

On arrival at the hospital, in less than three quarters of an hour after the injury, he showed unmistakable signs of shock from hemorrhage. He had a pale anxious expression of the face, rapid pulse and respiration, abdomen very rigid and distended.

Laparotomy was done at once. No external marks of violence were in evidence on the skin but the right rectus muscle was found torn completely through. Upon opening the peritoneum, considerable blood was found. Examination revealed that the mesentery was stripped from the upper portion of the ileum for a distance of one foot. No other injury was found. Resection of the bowel and an end to end anastomosis was done. A fistula developed and was closed at a third operation. Patient made a good recovery and is well.

4. A car builder received a severe crushing injury to the abdominal region.

Complained of a little pain and tenderness across the lower part of the abdomen. Pulse and temperature normal. Catheterization indicated no injury to the bladder or kidneys. Apparently he was not seriously hurt. The next morning his pulse had risen to 120, respiration were more rapid and shallow, abdomen rigid and distended.

*Operation* was immediately done through median incision. No local injury present in the skin or muscle. When the peritoneum was opened, a large quantity of bile escaped. No injury could be found in the intestines exposed in the field at this point. The condition of the patient was so alarming that a drain was placed in the lower end of the incision, abdomen sutured as rapidly as possible and he was returned to bed suffering from considerable shock. Morphine was given freely. Saline by rectum and other means to combat shock used and the patient recovered from the shock. The abdominal wound drained bile for four days then ceased and the drain was then removed. Up to this time, nothing by mouth was given. Four days later, when convalescence seemed to be progressing favorably, he got out of bed. In the afternoon of the same day, he was suddenly seized with nausea, vomited enormous quantities of blood and died.

5. Car inspector received a squeezing injury to the upper and right quadrant of the abdomen.

No rise in pulse, temperature or respiration. Some tenderness and a little pain and a slight redness of the skin at the site of injury. No blood in the urine.



In view of past experiences, laparotomy was done at once and the abdominal viscera carefully examined. No injury was found. Only a few old adhesions of the right lobe of the liver to the parietal peritoneum. He made a good recovery. He left the hospital none the worse for the exploratory laparotomy.

6. A laborer, received a severe crushing injury, about the pelvis. He was immediately sent to the hospital.

X-Ray showed fracture at the symphysis pubis with considerable displacement, also fracture through the ilium and ischium.

He was rigid about the abdomen, and complained of pain, a diagnosis was made of rupture of the bladder, which was confirmed by laparotomy. The patient died of pneumonia in ten days.

#### DIAGNOSIS-PROGNOSIS.

An early diagnosis is extremely important, as every hour of delay greatly diminishes the chances of recovery. A complete rupture of the intestines is incompatible with life without operative treatment. According to statistics, the mortality is 51 per cent. Siegel's analysis of 376 cases gives the following:

Cases operated upon within the first four hours had a mortality 15.2.

Cases operated upon within 5 to 8 hours had a mortality 44.6.

Cases operated upon within 9 to 12 hours had a mortality 63.6.

Cases operated upon later than 12 hours had a mortality 70.0.

#### PAIN.

A patient suffering from an abdominal injury usually will complain of pain or at least of some tenderness of the abdominal wall. Muscular rigidity is often absent at first. Continuous and increasing pain or pain relieved by a hypo of morphine and which requires a second dose, is very significant of serious abdominal injury.

#### PULSE.

Unless there has been a rupture of a large vessel or a tear in the liver, or any injury that will cause immediate and profuse hemorrhage, the pulse rate may be but little influenced at first, but as the flow of intestinal contents and hemorrhage into the abdominal cavity continue, the pulse rate will begin to rise. Therefore an increasing pulse rate, alone, is sufficient warning that a serious injury has occurred and a laparotomy should be advised.

Muscular rigidity and tympanites are other very important symptoms—the rigidity which appears and involves the entire abdominal musculature, the kind that is so uniformly resistant

to the examiner's hand. It is often noticed that a dose of morphine does not affect that tense, board-like rigidity in these cases. Therefore, muscular rigidity of this type, coming on after an injury, should arouse suspicion of a serious lesion. In fact, I do not think I have ever seen a patient suffering from any acute surgical condition of the abdomen, that did not have muscular rigidity and tympanites.

Vomiting is practically always present in rupture of the intestine. It usually comes on in a few hours, and if persistent, indicates that grave injury to the abdominal viscera has occurred, and this symptom alone should be indicative of an exploratory laparotomy.

#### RESPIRATION.

As the distention and muscular rigidity increase, the respiration becomes more shallow and rapid.

Temperature is not affected early except in hemorrhage, then it may be subnormal. With the onset of peritonitis, it will rise and a sudden fall may occur in collapse. Temperature is about the least important in diagnosis of abdominal injury.

#### FACIES.

Facies, is usually not at all pronounced until the patient is in desperate condition, except, when there has been a rapid hemorrhage and profuse discharge of intestinal contents into the abdominal cavity. However, this symptom appears sooner or later in all serious abdominal injuries, but to wait until it does appear, is a loss of much valuable time and will tip the balance against the chances of recovery in all instances.

The cases most difficult to diagnose are those in which the rupture of the intestine has occurred high up, and when the injury occurred a long time after taking food.

Late symptoms of intestinal rupture are due to the fact that there was only a contusion of the bowel which later sloughed.

While not recommending that indiscriminate opening of the abdomen be done in all abdominal injuries, one may, in doubtful cases, be justified in doing exploratory laparotomy rather than wait for pathenomonic symptoms to appear, provided injury to the chest and kidneys are excluded. Perhaps a better procedure when abdominal injury has been sustained, would be to have some reliable person count the pulse every hour and also note signs of muscular rigidity, vomiting, increasing pain, or any other symptom appearing in conjunction with stead-

ily increasing pulse rate; then the surgeon should be called at once. The patient should be in a hospital under close observation. Hemaglobin test and blood count should be made.

#### TREATMENT.

The first and very essential factor is prevention of more shock, for which morphine is par-excellence, and next speed in doing all that is required in such emergencies. In no instance can Annoci technic, with which, no doubt, you are familiar, be used to greater advantage than in these injuries. Additional shock must be entirely avoided or reduced to the minimum. Novocain, 1 to 400 with oxygen and gas, is quite satisfactory. Immediate repair of a ruptured intestine should be the rule, but in some desperate cases it may be impossible only to give drainage and stitch the bowel to the peritoneum.

A median incision affords opportunity for thorough search of the injury in most cases. If much blood is present, look at once for a rupture in the mesentery, a very short tear near the root of the mesentery, involving the large vessels, will mean, perhaps, that several inches of the bowel will be deprived of its blood supply and a resection of that portion must be done. Wounds of the liver are difficult to suture, but hemorrhage can be controlled by gauze packing.

When hemorrhage has been stopped, more

deliberation may be taken in searching for rupture, or perforation in the bowel. It is best to make a systematic search by beginning at the ilio-cecal valve and trace the intestine through its course.

Perforations are best closed by silk, or linen Limbert sutures and reinforced by omental graft, if it is thought necessary.

In cases demanding resection, I believe that the Murphy Button is of no advantage in saving time, and has the disadvantage of a foreign body.

No one should undertake the operative treatment of abdominal injuries unless he is prepared to do an anastomoses with a needle and thread. Surely there are suture methods at the present time with which, if one is familiar, will enable him to make an anastomoses quickly and neatly.

#### SUMMARY.

That rupture of the abdominal viscera does occur without giving immediate symptoms of so serious an injury. Awaiting pronounced or very obvious symptoms it is often then too late.

A patient with a history of a severe abdominal injury should be sent to the hospital and kept under close observation; when any symptoms begin to manifest themselves, a laparotomy should be done at once.

Use every means to prevent additional shock to the patient. Morphine is always indicated in shock from whatever cause.

*I will be in Grand Rapids*  
*August 31, September 1 and 2*  
*Attending the*  
*50th Annual Meeting*  
*of the*  
*Michigan State Medical Society*

## Grand Rapids

### Its Civic, Commercial and Social Environments

---

The Western Metropolis of Michigan and the second city of the state bids all the profession welcome during the Fiftieth Annual Meeting of the State Medical Society. It cordially invites not only the members but also the members' families and friends to participate in its hospitality.

largest in Michigan, and is often referred to as the "Metropolis of Western Michigan." In addition it is the metropolis of the most famous fruit belt in the world and the metropolis of the greatest summer resort territory between the two oceans.

The city was incorporated as such in 1850,



MONROE AVENUE—PANTLIND HOTEL IN THE DISTANCE.

We impart herewith a brief illustrated description of some of the city's civic, commercial and social environments.

#### GRAND RAPIDS, MICHIGAN.

The 1915 Convention of the Michigan State Medical Society will be held in the city of Grand Rapids. This city is the forty-fourth largest in the United States and the second

when it had a population of 2,500. Since that time it has marched steadily forward passing through no periods of stagnation and no periods of "mushroom" development, until today it is a city of upwards of 125,000 population.

When it is realized that Grand Rapids is not located on a trunk line of railroad and is not located on a navigable body of water, it must be also realized that its remarkable development and industrial prestige must be the result of

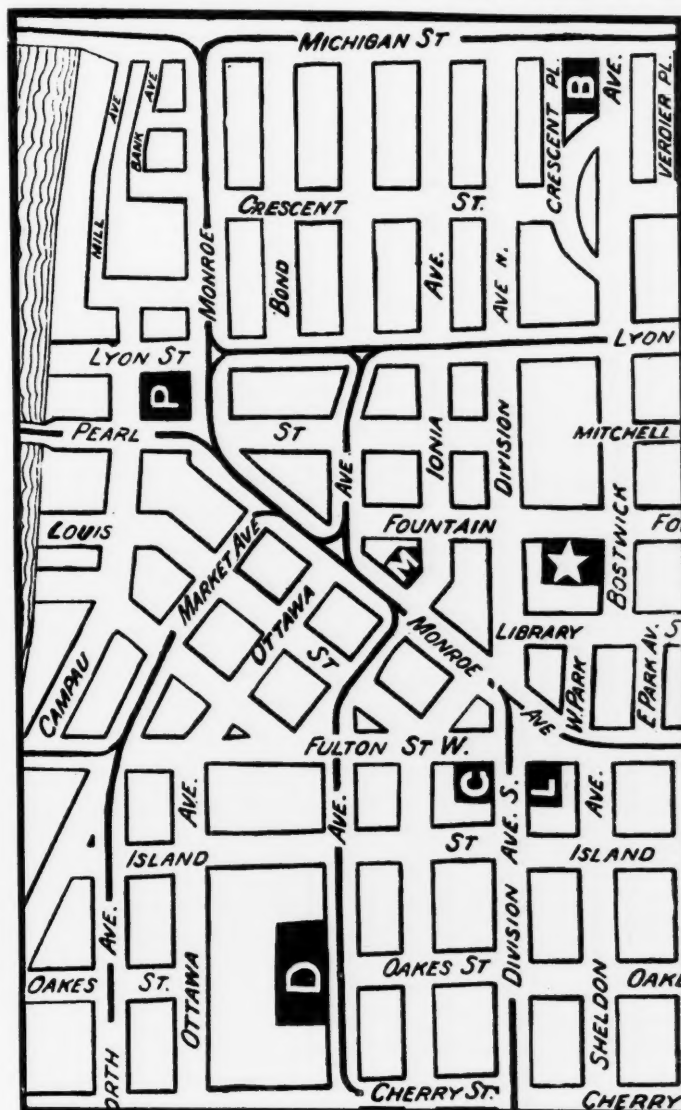


something else besides natural location and facilities.

For over thirty years the business men of the city of Grand Rapids have been organized for the purpose of making the city bigger and better, with the emphasis on the "better." These business men have been just as anxious to see the town develop ethically as they have to see it grow commercially.

As a result of the efforts of the business and

of any of the large cities of the United States and the lowest death rate of the same class of cities east of the Mississippi River. This death rate is lower than that of the United States at large and lower than the rate for the state of Michigan or the city of Detroit. The reasons for this remarkable low death rate are numerous, but the principal ones are as follows: The rigid inspection of the milk supply of the city and the operation of a modern and most efficient



THE BUSINESS  
CENTER OF  
GRAND RAPIDS

- \* Fountain Street Baptist Church
- P Plantlind Hotel
- C Cody Hotel
- L Livingston Hotel
- D Union Depot
- B Butterworth Hospital
- M Morton House

professional men and women of this city, certain conditions have sprung up within the city of which its citizens are extremely proud. The foremost among these conditions is the fact that Grand Rapids ranks second in the United States as to the per cent. of home ownership, being surpassed only by the city of Spokane, Washington. Forty-seven and nine-tenths per cent. of the homes in Grand Rapids are owned by the people who occupy them and Grand Rapids is in reality "A City of Homes."

Grand Rapids has the sixth lowest death rate

filtration plant; the maintenance of infant feeding clinics; the work of the Grand Rapids Anti Tuberculosis Society; the careful operation of the street railway system and the maintenance of the Blodgett Home, which enjoys the reputation of having the lowest death record for institutions of this character in the United States, if not in the world.

The banks of Grand Rapids have developed as the city has grown and during the sixty-five years of our existence as a city we have not had a bank failure. In fact the banks of this city

are so strong that it is embarrassing to the United States Government, which maintains a Postal Savings Department in the local post office, and the per cent. capita deposits in same are exceedingly low.

factories in Grand Rapids and many of them are engaged in an export business.

Our second largest industry is that of the flour and grist mills; our third industry is machinery and principally wood working ma-



A TYPE OF PUBLIC SCHOOL BUILDINGS.

According to the report of the State Factory Inspector in 1900 there were 324 factories located in Grand Rapids, and in 1914 this number had increased to 740. Of this 740, only 8 per cent. are furniture factories.

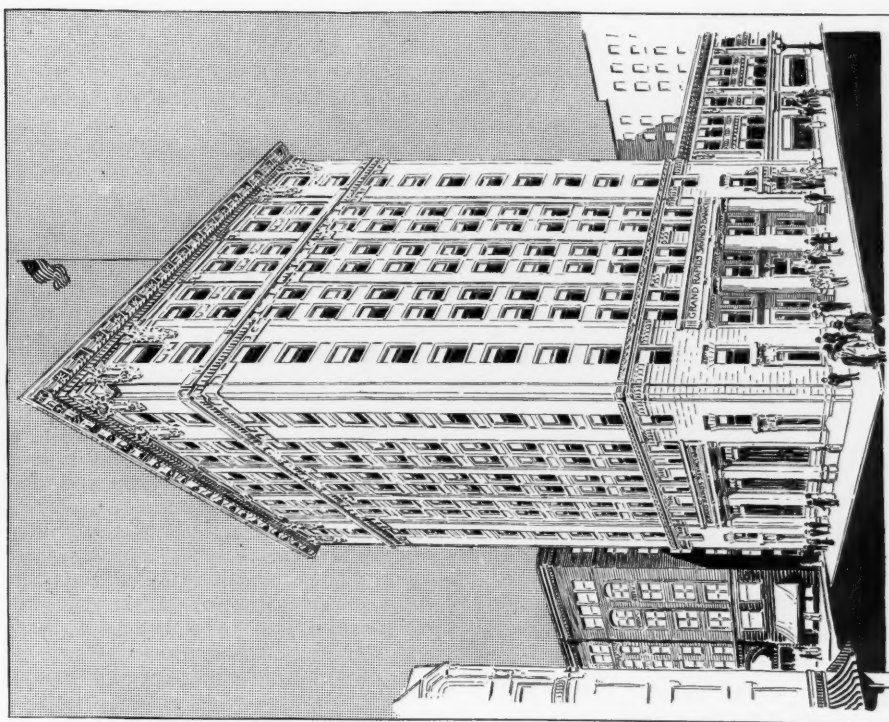
chinery; our fourth largest industry is printing. Grand Rapids enjoys the reputation of being one of the best printing cities in the United States, and once again this reputation is founded on quality and not on quantity.



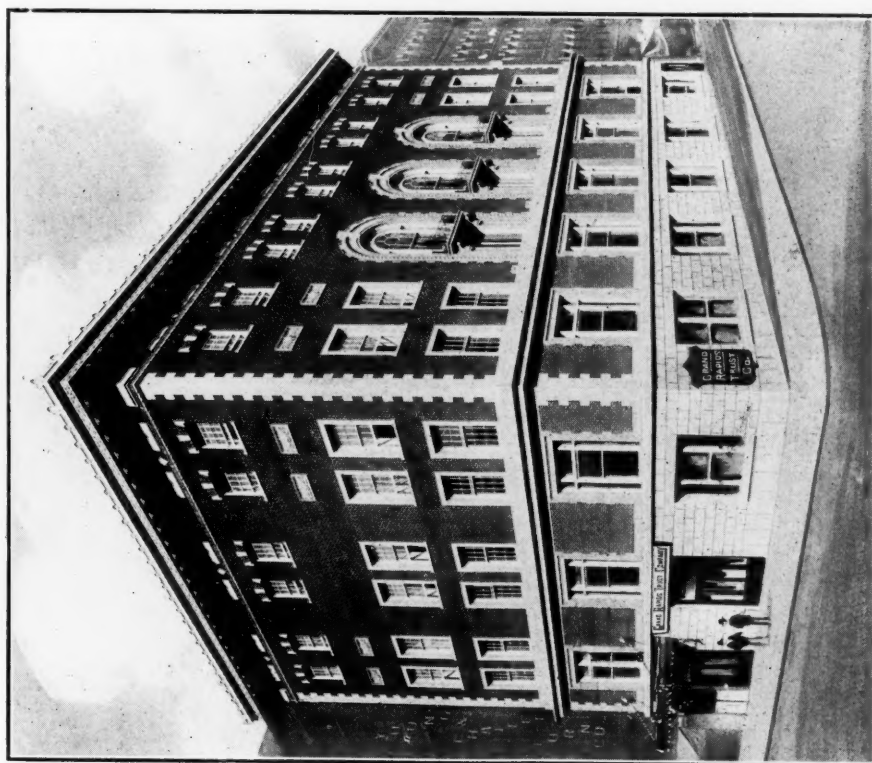
NEW HOTEL PANTLIND

While it is a fact that Grand Rapids enjoys the reputation of being the greatest furniture market in the world, this reputation has been created by the quality of the furniture and not by the quantity of the furniture manufactured in this city. There are some fifty-five furniture

Besides being famous for the furniture manufactured in this city, we have located here the largest sticky fly paper factory in the world, the largest refrigerator factory in the world and the two largest show case factories in the world. We are the largest producers in the



GRAND RAPIDS SAVINGS BANK—Corner Ionia and Monroe Avenues.  
Erection to Commence September, 1915.



PENINSULAR CLUB—Corner Fountain Street and Ottawa Avenue.



world of gypsum products; we have the largest window sash pulley factory in the world and the largest carpet sweeper factories in the world, also the only factory in the world manufacturing metal lacers for leather belts and machinery to fasten buttons on shoes. We have the largest



ONE OF THE DRIVES AROUND REED'S LAKE.



A SHADY LAKE IN JOHN BALL PARK.

factories in the United States manufacturing school seats and church pews, and the largest factory in the United States manufacturing manual training equipment.

As a wholesale center, Grand Rapids is practically the distributing point of all Western and Northern Michigan, Northern Indiana and Northwestern Ohio. We have wholesale houses

representing all the mercantile lines and these houses now do a business of upwards of \$40,000,000 annually.

During the past three years there has been constructed in Grand Rapids approximately \$11,000,000 worth of new buildings, among which are the second largest hotel in the state of Michigan, the largest Masonic Temple in the state, the second largest Young Mens Christian Association building in the state, a high school and several grade schools, a new hospital, new social club, new bank building, several new and modern manufacturing plants, and approximately 3,000 new residences.

Socially Grand Rapids has the reputation of being the largest city in the United States without a slum district, the largest city in the United States without a burlesque theatre, and one of the only cities in the state with its red light district entirely eliminated.

The business men of Grand Rapids support



KENT COUNTRY (GOLF) CLUB.

by annual contributions such institutions as the Grand Rapids Anti-Tuberculosis Society, the Social Welfare Association, the Infant Feeding Clinics, the Grand Rapids Association for the Blind, the D. A. Blodgett Home for Children, the Big Brothers Movement and several other philanthropic and charitable institutions.

In addition to providing the children of Grand Rapids with a common and high school education, our Board of Education has provided for a two year junior college course, giving the graduates two years credit at the University of Michigan and similar institutions, has provided for night schools and social centers, special instruction for exceptional children, and we enjoy the reputation of having the largest number of open air schools in proportion to our population of any city in the United States.

In order to make this city a better city in which to live, and in order to furnish as many



FILTRATION PLANT—DURING CONSTRUCTION.



ONE OF THE PLEASANT DRIVES IN JOHN BALL PARK.

of the conveniences of living as possible to as large a number of our citizens, we have succeeded in keeping down the cost of public utilities to such an extent that we have the lowest telephone rates of any large city in the United States; the second lowest water rates of any city from 100,000 to 300,000 population; the second lowest electric light and power rates for this same class of cities; the second lowest artificial gas rates for the large cities of the United States, and the lowest basic fire insurance rate of any city of 500,000 or under. Our

Association, a building which offered the privileges and attractions of other buildings in cities of the same class of Grand Rapids, and which might do as large and modern a work. This vision began to take shape in the spring of 1913, when the citizens of Grand Rapids pledged more than \$250,000 toward such a building, and on April 11, 1915, the completed building was thrown open to the public. This building contains all of the modern facilities needed for work among young men and boys, and so arranged that the very highest degree



NEW Y. M. C. A. BUILDING.

tax rate is below the average for cities of this size, and we are carrying a much smaller bonded indebtedness than the average for cities of 100,000 population or over.

It can truthfully be said that the Michigan State Medical Society will hold its 1915 convention in no mean city.

#### FIFTY YEARS OF PROGRESS.

##### YOUNG MENS CHRISTIAN ASSOCIATION.

For a number of years some of the leading citizens of Grand Rapids had a vision of a modern building for its Young Mens Christian

of efficiency possible in doing this work may be obtained.

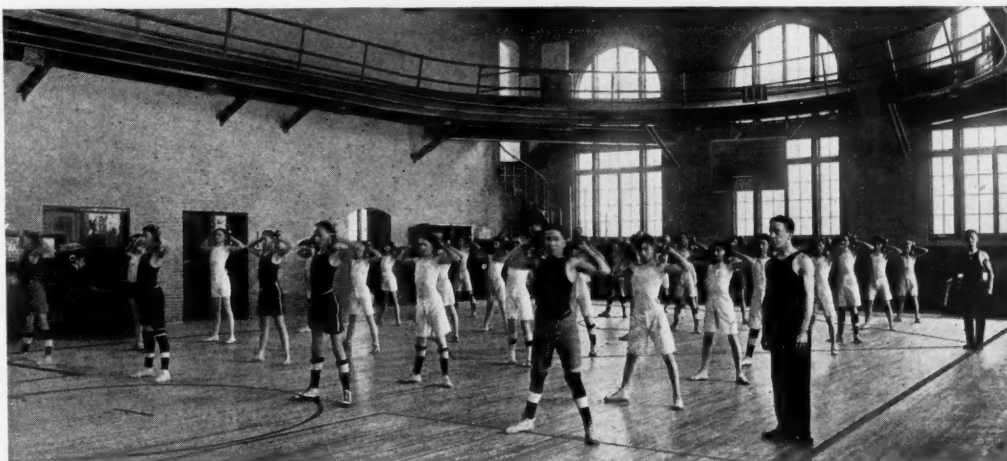
Grand Rapids with its population of 125,000 people, always has a large number of young men coming and going. To care for these young men properly, and to throw around them the best kind of influence, there was provided in this building 167 dormitory rooms with a total capacity of 207 young men. The rooms are equipped with the most practical and attractive furniture it was possible to obtain anywhere, all of which was purchased from Grand Rapids manufacturers. On the date of the writing of this article, sixty days after the opening of



the building, 179 young men were living in 157 of these rooms, leaving but ten rooms vacant. Each dormitory floor contains shower baths and all the necessary toilet facilities. Elevator service is furnished at all times, and switch board service from seven in the morning, until ten at night. There is no finer place any-

in social converse. In connection with the social room are to be found the barber shop and cafeteria, where it is the aim of the Association to furnish the very finest possible type of service at the most reasonable cost.

It is impossible to find anywhere a physical department which is more beautiful, and which

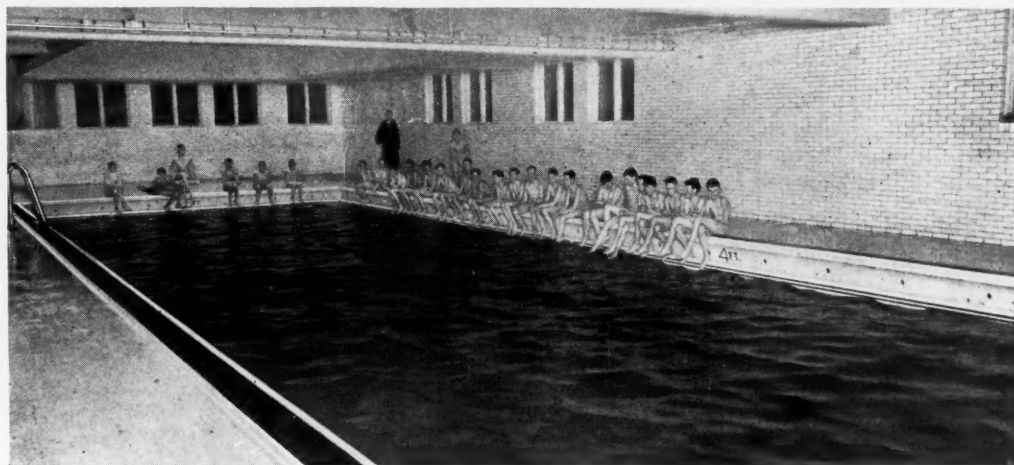


Y. M. C. A. GYMNASIUM FLOOR.

where for young men away from home to live than in the modern dormitory system of the Young Men's Christian Association.

As we make progress in the development of our civilization, we find it necessary to find some wholesome place for young men to congregate and spend their leisure time.

at the time offers the possibility of the very finest type of efficient supervision. The physical director from his office windows may control the swimming pool, both the large and small gymnasiums, and the wrestling and boxing room. The swimming pool contains 52,000 gallons of water which is being forced through

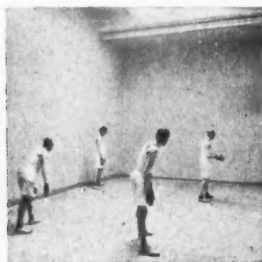


Y. M. C. A. SWIMMING POOL

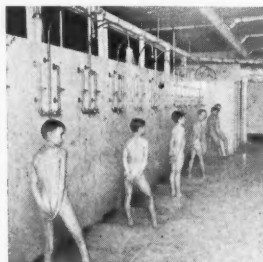
The lobby of the boys' division furnishes a place for boys under 18 years of age to play games, and indulge in the various forms of recreation. The men's lobby furnishes a quiet place to read or converse with a friend, while the social room on the first floor with its billiard and pool tables, checker and chess games, offers to young men a place to spend many hours

a filter twice every twenty-four hours. This filtration plant makes it possible for the men and boys to indulge in the pastime and exercise of swimming and diving in a lake of filtered spring water. The shower rooms, locker rooms, and the steam room, are fitted with the very latest type of equipment for efficient and comfortable service. To those who find it necessary

to indulge in some regular form of exercise in order to keep up efficient health the seven hand-ball courts and the gymnasiums offer the op-



HAND BALL



JUNIOR SHOWERS

portunity for recreation and exercise in its various forms.

#### WORK OF THE GRAND RAPIDS ANTI-TUBERCULOSIS SOCIETY.

MRS. ETHEL MCC. HENDRIKSEN,  
Executive Secretary.

Vision on the part of a small group of prominent citizens led to a public meeting March 3, 1905, addressed by Dr. Victor C. Vaughan, Dean of the Medical Department of the University of Michigan, at which the Grand Rapids Anti-Tuberculosis Society was formed with eighty charter members. It had the distinction of being the first organization of its kind in the state of Michigan, although the Detroit Society was formed a few days afterward.

After ten years of educational work conducted with ever increasing emphasis, the Society has brought about a remarkable decrease in the tuberculosis death rate of the city. The average death rate per 100,000 population for three years before the organization of the Society was 121.7 as compared to an average of 95.4 in the last three years. The rate in 1914 was 87 per 100,000, the lowest in the city's history. Had the sanatorium facilities in city and state been adequate to meet the needs there is no doubt but that this rate could have been still lower.

The first step the Society took was the employment of a visiting nurse. At the present time five of these nurses are employed to visit patients in their homes and to assist at the free dispensary. The free tuberculosis dispensary was opened in 1908. At the present time it is serving an average of 160 patients a month and the Society retains two physicians, paying them a small amount for their services to be present at daily clinics. Early diagnosis at the tuberculosis clinic has been the means

of saving many lives and preventing tuberculosis. All cases are followed up in their homes by the nurses and careful instruction and supervision given.

Without the aid of publicity it was found impossible to properly finance the work. Five years ago the Society was spending less than \$1,000 annually in its work and having a hard time to raise this amount. At the present time the work is drawing to its support about \$10,000 a year. This growth can be traced entirely to the employment of an executive secretary and the building up of a business and educational department as an adjunct to the clinic and nursing division.

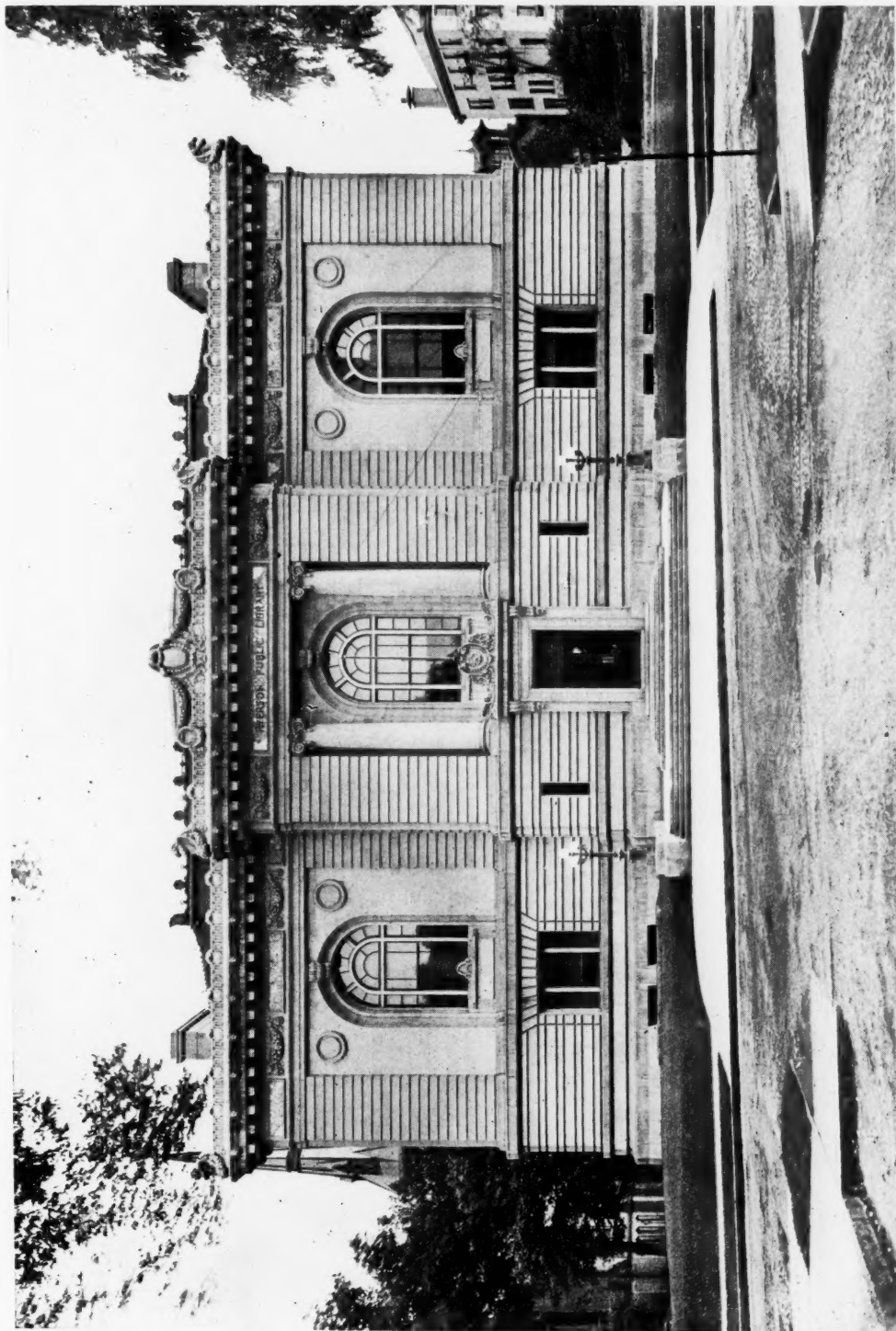
Tuberculosis education in Grand Rapids is carried on by means of exhibits, distribution of literature, moving picture films, lectures, newspaper write-ups and street car posters. The Society takes the initiative in the annual "Fly-less City" campaign, is interested in such subjects as municipal, factory and school sanitation, improving housing conditions and increasing healthful recreation facilities. The first open-air school in the city was the result of the interest taken by the local anti-tuberculosis society. Work in the rural schools of the county has been organized by the Society and is being financed by the Board of Supervisors who pay the salary of the nurse and provide an automobile for her use. The Society has taken an active interest in State and National organizations and has done its share to further the progress of the work.

Even with such advance as has been made in Grand Rapids, when compared to all that must be done in the campaign which earnestly hopes to exterminate tuberculosis, seems but a scratch on the surface. The Society has in view a more intensive campaign in every direction and this campaign will be put into effect as rapidly as the money is forthcoming. Nations do not hesitate to spend billions for war which has for its object destruction of human life, but all spend niggardly in campaigns which have life saving and health protection as their object. We must learn to regard expenditures for public health as investments for public well being and it is in educating public sentiment in this direction that anti-tuberculosis societies perform their greatest service in a community.

**GRAND RAPIDS PUBLIC LIBRARY.**

The Grand Rapids Public Library is the district library for the school district conterminus with the city of Grand Rapids. As

Library Commissioners consisting of five persons elected at large, for a term of five years, one each year, with the Superintendent of Schools ex-officio, making six members in all.



RYERSON LIBRARY BUILDING.

such it is part of the educational machinery of the state, provided for in the state constitution. Legally it is separate and distinct from the city government.

The Library is administered by a Board of

Women vote for members of the Board and are eligible to membership on it. The Board is purely an administrative one. The title to all the property under its control is vested in the Board of Education.



The Library now contains over 150,000 catalogued books, and serves the public through ten branch libraries in various parts of the city. Before the end of the calendar year there will be twelve branch libraries in operation, in addition to the Ryerson Library building.

The latter building is one of the architectural features of the city. It is well worth a visit. At the time it was erected (1904) it was the largest and most costly building of any city of 100,000 population in the country, and this is still true of cities of the size of Grand Rapids with one or two exceptions. The building is the gift of Mr. Martin A. Ryerson of Chicago, who was born in Grand Rapids, and it is a testimony of his affection for his native place.

Besides the branch libraries there are deposit collections of books in some thirty school buildings and industrial establishments. Traveling library collections are sent to many institutions. All together there are ninety-one points in the city for the use and distribution of books.

The reading room feature of the Library has been greatly emphasized. Over 1,200 current periodicals, representing some 900 different titles, are on file. In the Ryerson building there is a special newspaper and magazine reading room, a children's reading room, a Michigan historical room, a general reference room, and medical reading room. In the latter some forty current medical periodicals are on file.

In addition to its regular work the Library gives every winter over 100 free lectures, both at the Ryerson building and at the branch libraries. Art exhibits are also given regularly in the Ryerson building, the walls of the corridor and of the lecture room being used for this purpose.

The historical collection which centers in the Michigan Room is one of considerable importance, said to be next to that of the great Burton collection of Detroit. There are over 20,000 books, pamphlets, maps, and manuscripts on Michigan history.

The reference work of the Library has been especially emphasized. Over 40,000 volumes are reference books. *Of these nearly 5,000 are medical works*, many of them now of historical interest only, having come to the Library from the Medical Library Association formerly in existence in this city.

Last year the number of persons who came to the Library to use it was over seven times the population of the city. Visitors to the city are always welcome, either to see the building or to use the materials in it.

## DISTRICT NURSING ASSOCIATION

The District Nursing Association of Grand Rapids was first formed in 1893. It was then a department of the Charity Organization Society and remained under the management of that organization until 1908. In 1908 the work was reorganized and a separate society formed. At that time it was the only public health organization in the city and employed but three nurses. As the work grew there was found to be a need for special emphasis being given certain forms of disease and conditions and other nursing organizations were formed to meet this need.

The Association now employs six nurses. The nurses care for all kinds of cases except a



few of the contagious diseases and those are cared for by the Societies doing specialized nursing. It is the aim of the District Nursing Association to provide trained nurses to visit the sick in their homes, to care for them and to give instruction in the simple rules of hygiene and sanitation. Like all public health workers we realize the importance and necessity of preventive work. About one-third of the calls made can be classed under the head of supervision and instruction.

We endeavor to teach our people how to properly care for themselves and to guide them into better ways of living. This sometimes is more important than the bedside care given those who are ill.

The Association does not plan to give material relief but through the generosity of our friends, baby outfits are provided to those who need them and milk is supplied to our patients requiring extra nourishment. A loan closet is maintained from which sick room appliances, nightgowns, towels and bed linen are loaned families during illness.

Visits are made to the hospitals each week. Cases about to leave the hospital and requiring further care or supervision are reported and a nurse then visits the case. As in all our work

can afford to pay. By so doing we are able to reach many who otherwise would be deprived of skilled nursing, for the man earning a small salary does not wish a free service but he does



ARRIVAL OF DISTRICT NURSE.



THE SAME PATIENT, BED AND ROOM. WHAT THE NURSE ACCOMPLISHED.

cases requiring a nursing service must be under the care of a physician.

Our work is not limited to the poor alone. A charge of fifty cents is made to those who

wish his family to receive good care.

The Metropolitan Life Insurance Company give a visiting nursing service to its industrial policy-holders. This work in Grand Rapids is

done by our Association at the expense of the Metropolitan Life Insurance Company.

Through the generosity of the hospitals and guilds who give us the use of free beds we are able to provide hospital care for many of those who are seriously ill.

The success of the work has been largely due to the splendid support given by the medical profession and we wish to take this opportunity to express to them our appreciation for this co-operation.

three miles from Grand Rapids, Ramona has the immediate advantage of the lakeside resort in added beauty, swimming beaches and a beautiful boating rendezvous. Several private as well as public swimming schools and bath houses border the lake at which strangers may be assured the most courteous treatment as well as competent attendance. On the other hand boat liveries by the score have all varieties of launches, rowboats and canoes for the pleasure of guests at Ramona.



RAMONA SUMMER THEATRE.

### RAMONA PARK.

Seldom, if ever, has nature provided a location where so many attractions, natural and otherwise, can be offered the refined amusement seeker, as at Ramona Park and seldom, if ever, has park management been more conscientious in providing for patrons than at Ramona. The result is an amusement park which has become nationally known for its many attractions, its natural beauty and for the refined people which visit it weekly throughout the summer season.

Situated on the west shore of Reed's Lake,

Just up from the lake on a high bank overlooking the lake is located Ramona Theatre, which is known from coast to coast among actor folk and theatre goers alike, as the prettiest and coolest summer theatre in the United States. Ramona Theatre has an additional reputation just as important, and that is that no person ever saw a show in this playhouse that offended. Vaudeville of exceptional merit is booked throughout the summer at Ramona and some of the best acts on the American stage may be seen here at probably the most moderate prices that prevail anywhere.



Back of Ramona Theatre and separated from it by an asphalt boulevard that runs across the middle of the park is the Dancing Casino which boasts the finest floor in Michigan as well as music throughout the season by a special orchestra. Here under competent instructors beginners are taught all the modern dance steps and dance lovers are able to find pleasure amid surroundings that could not be more carefully managed. The Casino is one of the most popular attractions at Ramona and architecturally is a credit to any resort with its California

ance of an attendant. Also the Circle Swing is a delight to the little ones. A trip out over the lake in this swing is a memory that any child will take away from Ramona.

Around Ramona's "Circle" will be found myriad other attractions such as Japanese Rolling Ball, shooting galleries, candy booths, fish ponds, ball throwing contests, miniature railways, etc.

The wealth of shade trees and the beautiful lawn slopes at Ramona need no artificial improvement to make this lakeside resort the ideal



RAMONA'S DANCING PAVILLION.

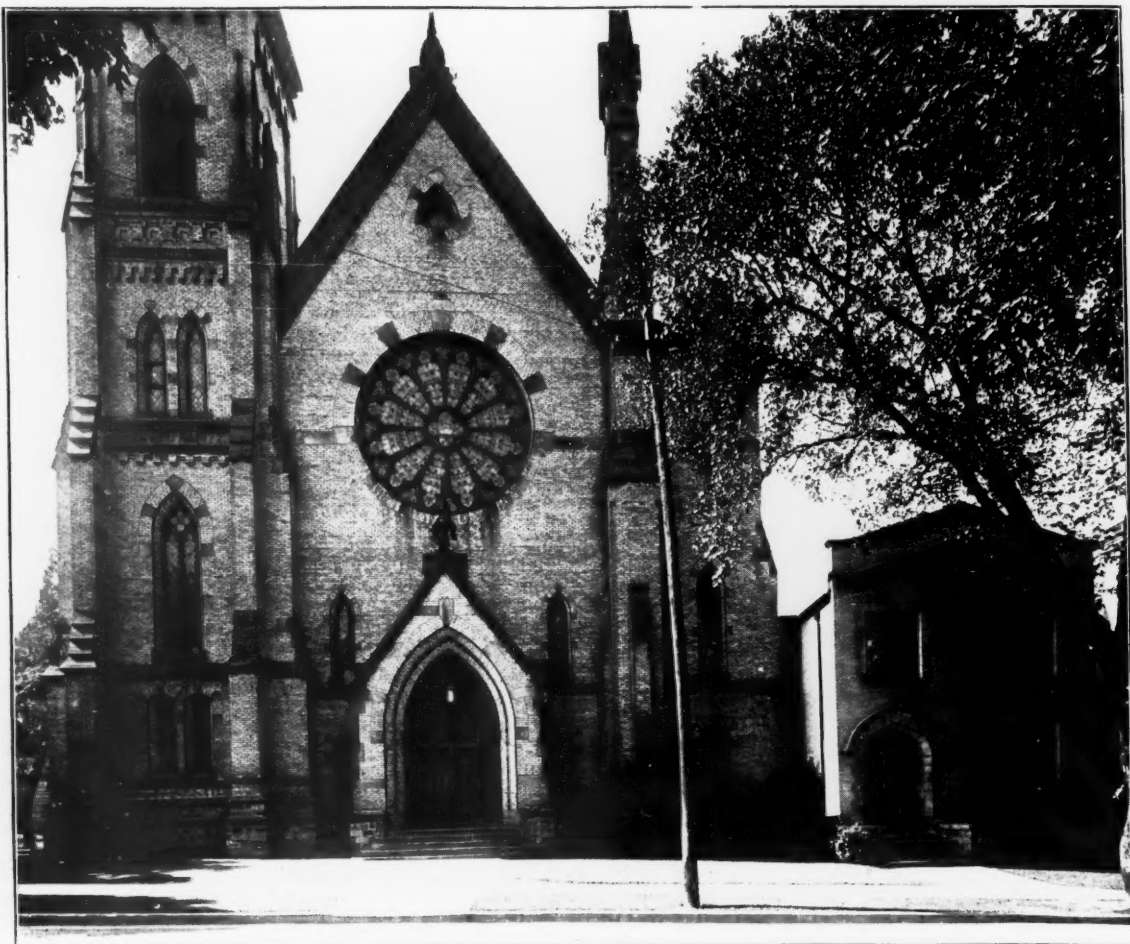
stucco construction and semi open air side walls.

Ramona Racing Coaster offers those in search of thrills, nearly a mile of excitement at a speed that nearly takes the breath. Two train loads run on adjoining tracks and take the several dips, hills and twists with startling rapidity. The roller coaster is constructed so as to provide assured safety and is carefully inspected each day.

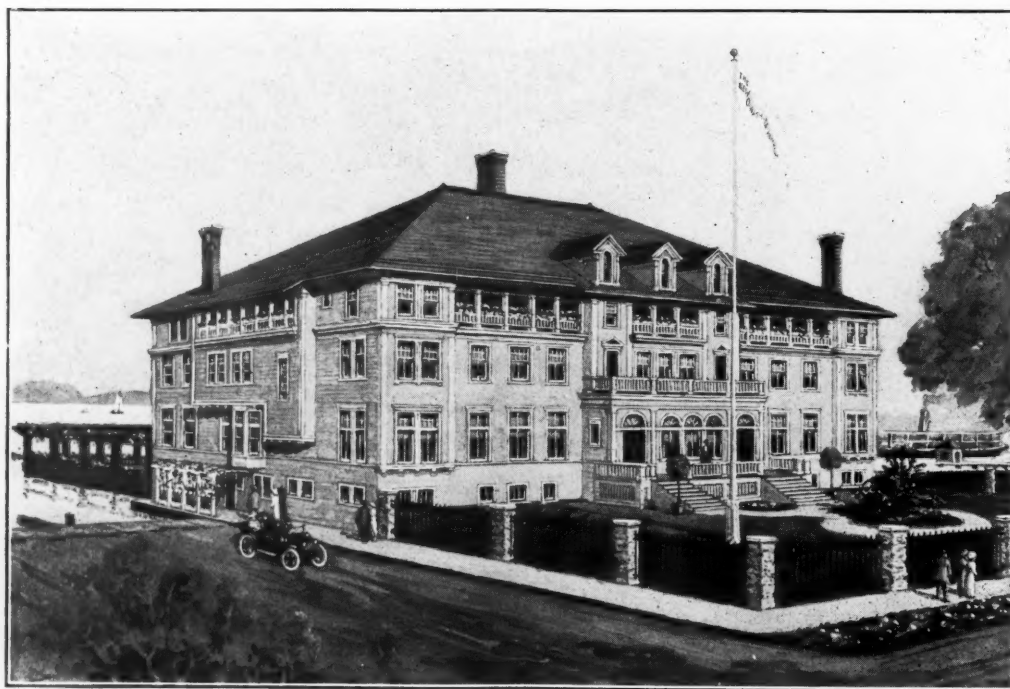
For children Ramona has the finest Carousel built, with horses, chariots, camels and elephants for the kiddies to ride upon. Nearby is a pony livery where the children may ride real live ponies, always under the careful guid-

picnic spot of Grand Rapids. However, the management has added two splendid pavilions with plenty of chairs and tables for the convenience and comfort of picnickers and many a tired laborer has enjoyed, with his family, a Sunday picnic in this beauty spot.

Ramona has no paid entrance, the street cars carrying people directly into the park. It is only a fifteen minute ride from the center of Grand Rapids through the city's most beautiful residence section. By automobile, Ramona is reached via Grand Rapid's beautiful Lake Drive, past Fisk Lake and several of Michigan's most elaborate summer homes.



FOUNTAIN STREET BAPTIST CHURCH AND GUILD HOUSE.  
Headquarters for all Sessions.



OWASHITANONG CLUB—Reed's Lake.

# Official Program

## 50th Annual Meeting Michigan State Medical Society

### Grand Rapids, Kent County

#### August 31, September 1 and 2, 1915

---

#### MEETINGS

THE COUNCIL will meet in regular session

August 31 at 8 p. m., Pantlind Hotel.

September 1 at 12:00 m.

September 2 at 12:00 m.

THE HOUSE OF DELEGATES

Main Auditorium, Fountain St. Baptist Church.

First Session. September 1 at 8 a. m. sharp.

Second Session. September 2 at 8 a. m. sharp.

GENERAL SESSION

Main Auditorium, Fountain St. Baptist Church.

First General Session. Sept. 1 at 10:30 sharp.

Second General Session. Sept. 2 at 11:30 sharp.

Reuben Peterson, President.

F. C. Warnshuis, Secretary.

#### MEETING PLACES

The Fountain Street Baptist Church and its adjacent Guild House has been secured for quarters for all the several sessions. This church is centrally located at the corner of Fountain and Bostwick Street, five blocks from the Pantlind Hotel, two blocks from the Morton House and from three to five blocks from the other hotels.

The church is amply large to provide session rooms, as required.

The GENERAL SESSIONS and the HOUSE OF DELEGATES will meet in the church auditorium.

The SECTION ON SURGERY will hold its sessions in this same main auditorium.

The SECTION ON MEDICINE will hold its meetings in the Sunday School Room on the first floor; seating accommodations in this room are amply large enough to care for 500 people.

The SECTION ON GYNECOLOGY AND OBSTETRICS will meet in the auditorium on the second floor of the Guild House.

The SECTION ON OPHTHALMOLOGY AND OTO-LARYNGOLOGY will hold its meetings in the Rest Room on the first floor of the main building.

The EXHIBITS will be found on the first floor of the Guild House.

The REGISTRATION BOOTH AND INFORMATION BUREAU will be found in the main entrance to the Guild House, Fountain Street entrance.

With these arrangements there should occur no confusion, as all the session rooms are under one roof and intercommunicating.

#### SECTIONS

The four scientific sections will meet:

September 1 at 1:45 p. m.

September 2 at 9:00 a. m. and 1:30 p. m.

MEDICAL SECTION convenes in the Sunday School Room on the first floor of the Guild House.

SURGICAL SECTION convenes in the main auditorium of the church.

GYNECOLOGY AND OBSTETRICS SECTION convenes in the auditorium on the second floor of the Guild House.

EYE, EAR, NOSE AND THROAT SECTION convenes in the Rest Room on the first floor of the main building.

COUNTY SECRETARIES ASSOCIATION will hold its Seventh Annual Meeting and Dinner at the Peninsular Club, August 31 at 5 p. m.

C. B. Fulkerson, President.

J. A. Wessinger, Secretary.

#### REGISTRATION

Each member should register promptly on arrival and receive official program, entertainment features and badge. The Registration Booth will be in the Guild House. On Tuesday evening a temporary Registration Booth will be found in the lobby of the Pantlind Hotel.

#### ENTERTAINMENT

**Tuesday Evening, August 31, 1915:**

There will be a Buffet Luncheon and Smoker in the Monk's Room of the Peninsular Club (Cor.



Ottawa Ave. and Fountain St.) Entertainment will be provided until a late hour. The local profession hope that those arriving on late trains will come directly to the Club. This will be entirely informal.

Arrangements are perfected for unveiling "September Morn."

#### Wednesday Evening, September 1, 1915:

8:00 p. m., Owashtanong Club, Reeds Lake, President's Reception followed by dancing.

Vaudeville, 8:30 p. m., Ramona Theatre, Reeds Lake, just across from the Club. Tickets will be issued to those not caring to dance.

10:00 p. m. Refreshments will be served on the lower floor of the Owashtanong Club.

Golf. Those desiring to play golf will be provided with visitor's cards to the New Highlands Golf Club and the Kent Country Club.

#### LADIES' ENTERTAINMENT

**Headquarters. Ladies' Literary Club, 59 Sheldon Ave., S. E.** Please register. Local members of the committee will be in attendance at 9 a. m. and 2 p. m. to direct and accompany visiting guests about the city. Automobiles will be in waiting. Details of the entertainment features will be imparted on registration.

#### LADY PHYSICIANS

The woman physicians of the Kent County Medical Society request the presence of the visiting woman physicians September 1, from four until six o'clock at the residence of Dr. Frances A. Rutherford, 55 Sheldon Ave., S. E.

#### EXHIBITIONS

The scientific and commercial exhibits will be found in the Guild House.

#### HOUSE OF DELEGATES

Main Church Auditorium.

Reuben Peterson, President.

F. C. Warnshuis, Secretary.

#### FIRST SESSION.

September 1st at 8:00 A. M. Sharp.

#### ORDER OF BUSINESS:

1. Call to order.
2. Report of Committee on Credentials.  
L. S. Ramsdell, Manistee, Chairman.
3. Roll call.
4. Presentation of minutes of 49th session.
5. Annual report of the Council.  
W. T. Dodge, Big Rapids, Chairman.
6. Report of Committee on Legislation and Public Policy.  
A. M. Hume, Owosso, Chairman.

7. Report of Committee on Public Health Education.

Guy L. Kiefer, Detroit, Chairman.

8. Report of Committee on the Study and Prevention of Tuberculosis.

Victor C. Vaughan, Jr., Detroit, Chairman.

9. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

W. R. Parker, Detroit, Chairman.

10. Report of Committee on Medical Education.

B. R. Shurly, Detroit, Chairman.

11. Report of Committee on Venereal Prophylaxis.

Udo J. Wile, Ann Arbor, Chairman.

12. Report of Committee on Specialties.

Emil Amberg, Detroit, Chairman.

13. Report of Committee on Compensation Fee Schedule.

C. B. Stockwell, Port Huron, Chairman.

14. Report of Delegates to A.M.A.

L. J. Hirschman, Detroit.

15. Election of Committee on Nominations.

The duty of this committee is to nominate:

- (a) 1st, 2nd, 3rd and 4th Vice-Presidents.
- (b) Delegate to A.M.A. to succeed E. T. Abrams.
- (c) Councilors for 1st, 3rd, 6th, 11th and 13th Districts; A. P. Biddle, S. K. Church, A. M. Hume, W. T. Dodge and F. C. Witter retiring.
- (d) To recommend place for holding the Fifty-first Annual Meeting.

The Nominating Committee is to be elected at the First Session of the House of Delegates. No two members of this committee shall be from the same councilor district.

16. Appointment of Committees by President:

- (a) Business Committee.
- (b) Special Working Committees.

17. Miscellaneous Business.

18. New Business.

19. Adjournment to General Session.

#### SECOND SESSION

Thursday, Sept. 2nd, 8:00 A. M. Sharp.

1. Roll Call.
2. Reading minutes of previous session.
3. Report of Business Committee.
4. Report of Special Committees.
5. Report of Nominating Committee.
6. Election of Officers.
7. Miscellaneous Business.
8. Adjournment *sine die*.

#### HOUSE OF DELEGATES.—DELEGATES AND ALTERNATES TO THE FIFTIETH ANNUAL MEETING.

Note.—The black face type is that of the delegate; the other that of the alternate.

**ALPENA—Branch No. 46**

(One Delegate)

**ANTRIM, CHARLEVOIX, EMMET—  
Branch No. 41**G. E. Frank, Harbor Springs.  
J. J. Reycraft, Petoskey.**BARRY—Branch No. 26**G. W. Lowry, Hastings  
J. G. McGuffin, Hastings**BAY—Branch No. 4**C. A. Stewart, Bay City  
A. F. Stone, Bay City  
E. Goodwin, Bay City  
J. C. Grosjean, Bay City**BENZIE—Branch No. 59**

(One Delegate)

**BERRIEN—Branch No. 50**C. W. Merritt, St. Joseph  
E. J. Witt, St. Joseph**BRANCH—Branch No. 9**W. A. Griffith, Coldwater  
H. W. Whitmore, Quincy**CALHOUN—Branch No. 5**E. L. Eggleston, Battle Creek  
W. L. Godfrey, Battle Creek  
C. E. Stewart, Battle Creek**CASS—Branch No. 36**J. H. Kelsey, Cassopolis  
E. W. Tonkin, Vandalia**CHEBOYGAN—Branch No. 58**C. B. Tweedale, Cheboygan  
W. R. Stringham, Cheboygan**CHIPPEWA-LUCE—Branch No. 35**J. J. Lyon, Sault Ste. Marie  
E. H. Webster, Sault Ste. Marie**CLINTON—Branch No. 39**E. L. Martin, Maple Rapids  
A. C. Hart, St. Johns**DELTA—Branch No. 38**Jas. Mitchell, Gladstone  
A. H. Miller, Gladstone**DICKINSON-IRON—Branch No. 56**J. A. Crowell, Iron Mountain  
C. F. Larson, Crystal Falls**EATON—Branch No. 10**A. R. Stealy, Charlotte  
A. H. Burleson, Olivet**GENESEE—Branch No. 24**H. A. Stewart, Flint  
W. G. Bird, Flint  
C. P. Clark, Flint  
J. C. Benson, Flint**GOGEBIC—Branch No. 52**E. H. Madajeski, Bessemer  
R. A. Paradise, Bessemer**GRATIOT—Branch No. 25**W. E. Barstow, St. Louis  
C. M. Denny, Middleton**HILLSDALE—Branch No. 3**

(One Delegate)

**HOUGHTON—Branch No. 7**P. D. McNaughton, Calumet  
J. G. Turner, Houghton**HURON—Branch No. 47**

(One Delegate)

**INGHAM—Branch No. 40**J. G. Rulison, Lansing  
F. M. Huntley, Lansing**IONIA—Branch No. 16**

R. R. Whitten, Ionia

**ISABELLE-CLARE—Branch No. 54**M. F. Brondstetter, Mt. Pleasant  
W. A. Young, Shepherd**JACKSON—Branch No. 27**W. A. Gitson, Jackson  
P. I. Edwards, Jackson**KALAMAZOO—Branch No. 64**Alice B. Ellsworth, Kalamazoo  
Fd. J. Bernstein, Kalamazoo  
J. H. Van Ness, Allegan  
J. C. Maxwell, Paw Paw  
N. L. Goodrich, South Haven  
B. A. Shepard, Kalamazoo**KENT—Branch No. 49**J. D. Brooks, Grandville  
R. C. Apted, Grand Rapids  
A. J. Baker, Grand Rapids  
Wm. H. Veenboer, Grand Rapids  
A. V. Wenger, Grand Rapids  
N. H. Kassabian, Coopersville**LAPEER—Branch No. 23**Peter Stewart, Hadley  
S. A. Snow, North Branch**LENAWEE—Branch No. 51**

I. L. Spaulding, Hudson

**LIVINGSTON—Branch No. 6**R. H. Baird, Howell  
H. G. Huntington, Howell**MACOMB—Branch No. 48**A. J. Warren, Mt. Clemens  
Jos. Croman, Mt. Clemens**MANISTEE—Branch No. 48**L. S. Ramsdell, Manistee  
H. D. Robinson, Manistee

**MARQUETTE-ALGER—Branch No. 28**

Carl F. Moll, Kenton  
A. W. Hornbogen, Marquette

**MASON—Branch No. 17**

C. M. Spencer, Free Soil  
Geo. Gray, Ludington

**MECOSTA—Branch No. 8**

J. B. Campbell, Stanwood  
Geo. H. Lynch, Big Rapids

**MENOMINEE—Branch No. 55**

(One Delegate)

**MIDLAND—Branch No. 43**

G. Sjolander, Midland  
F. A. Towsley, Midland

**MONROE—Branch No. 15**

Victor Sisung, Monroe  
F. C. Theide, Monroe

**MONTCALM—Branch No. 13**

Wm. H. Lester, Greenville  
E. P. Bunce, Trufant

**MUSKEGON-OCEANA—Branch No. 61**

V. A. Chapman, Muskegon  
F. B. Marshall, Muskegon

**NEWAYGO—Branch No. 50**

Willis Geerlings, Reeman  
G. G. Burns, Fremont

**OAKLAND—Branch No. 5**

(One Delegate)

**O. M. C. O. R. O.—Branch No. 11**

C. C. Curnalia, Roscommon  
A. C. MacKinnon, Lewiston

**ONTONAGON—Branch No. 66**

E. A. Florentine, Ewen

**OSCEOLA-LAKE—Branch No. 30**

Aug. Holm, LeRoy

**OTTAWA—Branch No. 32**

J. J. Mersen, Holland  
W. G. Winter, Holland

**PRESQUE ISLE—Branch No. 63**

(One Delegate)

**SAGINAW—Branch No. 14**

Robt. McGregor, Saginaw  
A. R. McKinney, Saginaw

**SANILAC—Branch No. 20**

G. S. Tweedie, Sandusky  
J. W. Scott, Sandusky

**SCHOOLCRAFT—Branch No. 57**

W. J. Saunders—Manistique  
Andrew Nelson, Manistique

**SHIAWASSEE—Branch No. 33**

J. A. Rowley, Durand  
J. N. Eldred, Chesaning

**ST. CLAIR—Branch No. 45**

A. J. MacKenzie, Port Huron  
W. H. Morris, Port Huron

**ST. JOSEPH—Branch No. 29**

R. E. Dean, Three Rivers  
D. K. Andrews, Three Rivers

**TRI COUNTY—Branch No. 62**

R. J. E. Oden, Cadillac  
C. B. Babcock, Kalkaska

**TUSCOLA—Branch No. 44**

C. W. Clark, Caro  
U. G. Spohn, Fairgrove

**WASHTENAW—Branch No. 42**

John A. Wessinger, Ann Arbor  
Wm. Blair, Ann Arbor  
Jas. G. VanZwaluwenburg, Ann Arbor  
Jas. F. Breakey, Ann Arbor

**WAYNE—Branch No. 2**

H. R. Carstens, Detroit  
F. B. Tibbals, Detroit  
F. N. Blanchard, Detroit  
J. A. MacMillen, Detroit  
H. J. Hirschman, Detroit  
R. C. Andries, Detroit  
J. W. Vaughan, Detroit  
Florence Huson, Detroit  
W. C. Lawrence, Detroit  
D. M. Campbell, Detroit  
G. E. Frothingham, Detroit  
H. W. Hewitt, Detroit  
C. E. Simpson, Detroit  
Jas. Cleland, Jr., Detroit  
A. F. Jennings, Detroit  
W. J. Wilson, Jr., Detroit  
L. F. C. Wendt, Detroit  
J. V. White, Detroit  
G. A. Bulson, Detroit  
R. K. Johnson, Detroit  
R. C. Jamieson, Detroit  
C. McClelland, Detroit  
H. R. Varney, Detroit  
G. E. McKean, Detroit  
F. T. McCormock, Detroit  
H. A. Freund, Detroit  
J. H. Boulter, Detroit  
J. W. Cunningham, Detroit  
E. W. Mooney, Detroit  
H. K. Shawan, Detroit

**GENERAL SESSIONS**

Place. Main Auditorium.

Sept. 1 at 10:30 A. M.

President—REUBEN PETERSON, Ann Arbor  
Vice-President—L. W. TOLES, Lansing  
Secretary—F. C. WARNSHUIS, Grand Rapids

1. Call to order.
2. Invocation—Rev. Alfred W. Wishart.



3. Address of welcome—Mayor Geo. Ellis.
4. Address of welcome—Eugene Boise, M.D., representing F. C. Warnshuis, President, Kent County Medical Society.
5. Response on behalf of the Society by President Reuben Peterson, Ann Arbor.
6. Report of House of Delegates—F. C. Warnshuis, Secretary.
7. Annual Address of the President. "The Past, Present and Future of the Michigan State Medical Society."  
Reuben Peterson, Ann Arbor.
8. Address. "The Medical Schools of the Last Half Century."  
Theo. A. McGraw, Detroit.  
Charter Member of the State Society.
9. Address. "Retrospect of the Early History of the Michigan State Medical Society."  
Geo. E. Ranney, Lansing.  
Charter Member of the State Society.
10. Miscellaneous Business. Under this head there will be a general discussion of medical economics. The opportunity is presented to every member to bring before the Society any subject of general interest either by informal discussion or formal resolution.
11. Nominations for President 1915-1916.
12. Adjournment.

## SECOND GENERAL SESSION.

Sept. 2, 1915 at 11:30 A. M.

1. Reading of minutes.
2. Unfinished business.
3. Report of House of Delegates.
4. Miscellaneous Business.
5. Announcement result of ballot for President.
6. Introduction of President-elect.
7. Resolutions.
8. Adjournment *sine die*.

## COUNTY SECRETARIES' ASSOCIATION—SEVENTH ANNUAL MEETING.

Tuesday Afternoon. 5:00, Peninsular Club Building—Monk's Room.

President—C. B. Fulkerson, Kalamazoo.  
Secretary—J. A. Wessinger, Ann Arbor.

Order of Business.

1. Call to order and roll call.
  2. Association Business.
  3. Election of officers.
- Adjournment to Dining Room.
4. Dinner as Guests of The Council.
  5. Round Table Discussion of County Society Work and Secretaries' Activities.

Every county secretary is not only invited but is urged to attend this meeting. The value of this meeting to every secretary cannot be overestimated. The Council especially requests your presence. Will you not come?

## SECTION ON GENERAL MEDICINE.

Chairman—Burton R. Corbus, Grand Rapids.  
Secretary—Benjamin A. Shepard, Kalamazoo.

### First Session, Wednesday, Sept. 1, 1:45 p. m.

(The Secretary will collect all papers as soon as they are read.)

1. Chairman's Address.  
Burton R. Corbus, Grand Rapids.
2. "Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis."  
Collins H. Johnston, Grand Rapids.
3. "Tuberculosis in Children."  
John B. Jackson, Kalamazoo.
4. "Miliary Tuberculosis of the Lungs in the Senile Period."  
Eva Rawlings, Kalamazoo.

### Second Session, Thursday, Sept. 2, 9:00 a. m.

1. "Heart Disease in Children."  
Walter J. Wilson, Jr., Detroit.
2. "The Practical Value of the Polygraph in the Diagnosis of Cardiac Disorders."  
Chas. F. Stewart, Battle Creek
3. "The Anxiety Neuroses in Their Relation to Neurological and Somatic Symptoms."  
Albert M. Barrett, Ann Arbor.
4. "Pyelo-Cystitis in Infancy."  
Clifford G. Grulee, Chicago, Ill.

### Third Session, Thursday Sept. 2, 1:45 p. m.

1. Election of chairman for one year; secretary for two years.
2. "The Roentgen Ray as an Aid in the Diagnosis of Intracranial Pathology."  
Preston M. Hickey, Detroit.
3. "The Differential Diagnosis Between Biliary Tract Infections and Gastric and Duodenal Ulcer."  
Chas. L. Mix, Chicago.
4. (Subject to be announced later.)  
Victor C. Vaughan, Ann Arbor.

## SECTION ON SURGERY.

Chairman—C. D. Munro, Jackson.  
Secretary—Alex. M. Blain, Detroit.

(The Secretary will collect all papers as soon as they are read.)

### First Session, Wednesday, Sept. 1, 1:45 p. m.

1. "Surgical Prognosis."  
Frank B. Walker, Detroit.
  2. "Surgery in a Country Hospital."  
W. J. Herrington, Bad Axe.
  3. "The Diagnosis of the Common Surgical Lesion of the Kidney."  
Daniel N. Eisendrath, Chicago, Ill.
- Discussants
1. Max Ballin, Detroit.
  2. Wm. J. Cassidy, Detroit.

4. "Congenital Hypertrophic Stenosis of the Pylorus."

Arthur O. Hart, St. Johns.

- Discussants 1. A. D. McAlpine, Detroit.  
2. R. E. Balch, Kalamazoo.

5. "Renal Tuberculosis."

Geo. Potter, Detroit.

- Discussants 1. Ray Stone, Battle Creek.  
2. V. L. Tupper, Bay City.

#### Second Session, Thursday, Sept. 2, 9:00 a. m.

1. "Ureteral Obstruction. Report of an Unusual Case."

Frank C. Witter, Petoskey.

- Discussants 1. Fredk. C. Cole, Detroit.  
2. John Dodds, Detroit.

2. (Subject to be announced later.)

Fredk. Albee, New York City.

- Discussants 1. A. LaFerte, Detroit.  
2. A. M. Campbell, Grd. Rap.

3. "Gas Bacillus Infection."

Angus McLean, Detroit.

(Class of wounds infected, evidence of infection, consequences and treatment.)

- Discussants 1. C. G. Darling, Ann Arbor.  
2. Ray Andries, Detroit.

4. "The Use of Duodenotomy as a Method for Removing Common Duct and Pancreatic Calculi." (Lantern Slides.)

Geo. M. Tood, Toledo, Ohio.

- Discussants 1. Clark D. Brooks, Detroit.  
2. Max Ballin, Detroit.

5. "A Consideration of the Anatomy, Pathology and Surgery of the Knee Joint." (Lantern Slides.)

Alexander M. Campbell, Grand Rapids.

- Discussants 1. Frank A. Kelly, Detroit.  
2. W. Ballard, Bay City.

#### Third Session, Thursday, Sept. 2, 1:45 p. m.

1. Election of Chairman for ensuing year.
2. "Retrocaecal Appendicitis."

H. W. Hewitt, Detroit.

- Discussants 1. J. J. Raycraft, Petoskey.  
2. H. E. Randall, Flint.

3. (Subject to be announced later.)

Frank W. Robbins, Detroit.

- Discussants 1. Grand Rapids.  
2. D. E. Robinson, Jackson.

4. "Recent Advances in Orthopedic Surgery."

Wm. E. Blodgett, Detroit.

- Discussants 1. Daniel LaFerte, Detroit.  
2.

5. "Peritoneal Adhesions and Intestinal Stasis."

J. A. MacMillan, Detroit.

- Discussants 1. L. J. Hirschman, Detroit.  
2. F. B. Marshall, Muskegon.

#### SECTION ON GYNECOLOGY AND OBSTETRICS

Chairman—A. Wellington Yates, Detroit.  
Secretary—Walter M. Manton, Detroit.

##### First Session, Wednesday, Sept. 1, 1:45 p. m.

(The Secretary will collect all papers as soon as they are read.)

1. Chairman's Address.

2. "Obstetrical Practice in Rural Districts."

C. T. Southworth, Monroe.

3. "The Necessity of Lying-in Hospitals."

E. Gustave Zinke, Cincinnati, Ohio.

4. Symposium on "Obstetrical Anesthesia."

- (a) Ether.

Boston, Mass.

- (b) Chloroform.

W. H. Morley, Detroit.

- (c) Scopolamin-Morphine.

Chas. E. Boys, Kalamazoo.

- (d) Gas and Oxygen.

N. Sproat Heaney, Chicago, Ill.

Discussion opened by John Bell, Detroit.

#### Second Session, Thursday, Sept. 2, 9:00 a. m.

1. Subject later.

Eugene Boise, Grand Rapids.

2. "Uterine Discharges: Their Pathology and Treatment."

E. K. Cullen, Detroit.

3. "Cancer of the Uterus."

W. P. Manton, Detroit.

4. "The Primary and End Results in Inoperable Carcinoma of the Cervix Treated by the Cautery Method."

Ward F. Seeley, Ann Arbor.

Discussion opened by F. C. Warnshuis, Grand Rapids.

5. "Further Remarks on the Psychological Aspect of Surgical Cases."

C. W. Moots, Toledo, Ohio.

Discussion opened by R. Parmeter, Detroit.

#### Third Session, Thursday, Sept. 2, 1:45 p. m.

1. Election of Chairman for one year.
2. "Gynecology."

Stuart Galbraith, Pontiac.

3. "Local Anesthesia in Abdominal Surgery."

J. H. Jacobson, Toledo, Ohio.

Discussion opened by Richard Smith, Grand Rapids.

4. "Conservative Surgery of the Ovary."

J. H. Carstens, Detroit.

5. "Roentgen Therapy in Certain Gynecological Affections."

Wm. A. Evans, Detroit.

#### SECTION ON OPHTHALMOLOGY AND OTO-LARYNGOLOGY.

Chairman—Stanley G. Miner, Detroit.

Secretary—Wilfred Haughey, Battle Creek.

##### First Session, Wednesday, Sept. 1, 1:45 p. m.

1. Chairman's Address.

Stanley G. Miner, Detroit.

2. Curettage of the Eustachian Tube in Treatment of Chronic Suppurative Otitis Media after Yankauer's Method.

J. E. Gleason, Detroit.

3. Treatment of the Detached Retina by the Sclero-trephine Operation.

Walter R. Parker, Detroit.

4. Abscess of the Tongue.  
J. Vernon White, Detroit.
5. Development of the Accessory Sinuses.  
P. M. Hickey, Detroit.

**Second Session, Thursday, Sept. 2, 9:00 a. m.**

1. The Effect of Loud Noises on the Organ of Corti.  
E. J. Bernstein, Kalamazoo.
2. The Relation of Localized Headaches and Some Organic Eye Lesions to Intranasal Accessory Sinus Diseases.  
P. J. Livingstone, Detroit.
3. Observations from Tonsil Operations Some Years Later.  
B. R. Shurley, Detroit.
4. Vincents Agina with Report of Cases.  
B. N. Colver, Battle Creek.

**Third Session, Thursday, Sept. 2, 1:45 p. m.**

1. Election of Officers.  
Chairman for one year.  
Secretary for two years.
2. Report of the Committee on Vaccine Therapy  
C. H. Baker, Bay City.
3. "Osteoma of the Frontal Sinus, with Report of Case."  
V. A. Chapman, Muskegon.
4. "Evolution of the Teeth and Nasal Development."  
Detroit.

**LOCAL DIRECTORY AND INFORMATION**

1. **The Union Depot** is located on Ionia Ave. and Oakes Street. Roads entering this depot are: Pere Marquette, Grand Rapids & Indiana, Michigan Central. Take cars passing depot for Morton House and Pantlind Hotel.
2. **Grand Trunk Depot** is located on Michigan Street and Grand River. Cars going east in front of depot take you to all hotels.
3. **Interurban Depot**—Lyon Street and Monroe Ave., on the north side of the Pantlind Hotel. Kalamazoo and Holland Interurban roads.
4. **Pantlind Hotel**, Monroe Ave., Lyon and Pearl Streets.
5. **Morton House**, Monroe Ave. and Ionia St.
6. **Cody Hotel**, Division Ave. and Fulton St.
7. **Livingston Hotel**, Division Ave. and Fulton Street.
8. **Peninsular Club**, Corner of Ottawa Ave. and Fountain St., half block from Monroe Ave. One block from Morton House. Two and one-half blocks from Pantlind Hotel. Three blocks from Fountain Street Baptist Church.

9. **Fountain Street Baptist Church**, corner of Fountain St. and Bostwick Ave.

**From Pantlind Hotel** walk up Pearl St. three blocks to Division Ave.; turn south (right) one block to Fountain Street; turn east (left) one block to church.

**From Morton House.** Go one block north to Fountain Street, turn east (right) two blocks to church.

**From Cody and Livingston.** Go north three blocks crossing Monroe Ave. to Fountain Street; turn east (right) one block to church.

10. **Owashtonong Club and Reeds Lake, Ramona Theatre.** Take anywhere on Monroe Ave. the following street cars going east:  
Cherry and Shawmut  
Wealthy-Taylor  
Wealthy-Scribner.

Twenty minutes ride; fare five cents.

The Owashtonong Club House is on the east, (lake) side, of Ramona Park.

Official Badge must be shown at the door to gain admittance to Club.

Tickets to theatre and concessions are to be obtained of the Entertainment Committee at Registration Booth. No tickets will be issued after 5 p. m., September 1.

11. Street cars run from 6 a. m. to 1 a. m.  
Last car leaves Reeds Lake at 11:50 p. m.
12. Central Standard Time.
13. Daily Papers—Grand Rapids Herald (morning), Grand Rapids Press and Daily News.
14. Telephones—Citizens and Bell (local and long distance.)
15. Don't hesitate to ask members of local Society when in quest of any information.

**LOCAL ENTERTAINMENT COMMITTEE**

D. Emmet Welsh, General Chairman,  
F. C. Kinsey, General Secretary,  
W. J. DuBois, Councilor 5th District,  
F. C. Warnshuis, President Kent County Medical Society.

**Committee Chairmen:**

Hall—R. H. Spencer,  
Exhibits—F. J. Lee,  
Entertainment—B. R. Corbus and entire membership of the Kent County Medical Society.  
Reception—J. D. Brook,  
Finances—F. C. Kinsey,  
Badges—A. V. Wenger,  
Ladies—Frances A. Rutherford.



# The Journal

OF THE

## Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

Arthur M. Hume, Chairman .....Owosso.  
A. P. Biddle .....Detroit.  
W. J. Kay .....Lapeer.  
W. J. DuBois .....Grand Rapids.

EDITOR  
FREDERICK C. WARNSHUIS  
Grand Rapids, Mich.

All communications relative to exchanges, books for review, manuscripts, news, advertising, and subscriptions are to be addressed to Frederick C. Warnshuis, M. D., 91 Monroe Ave., Grand Rapids, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions, communications, or advertisements.

Subscription Price—\$3.50 per year, in advance.

August

### Editorials

#### TUBERCULOSIS DAY.

As announced in the July issue, August 20th has been designated as Tuberculosis Day in Michigan. Our Anti-Tuberculosis Committee proposes to make this day reveal the number of cases of tuberculosis in Michigan. To this end they request all physicians to examine, free of charge, all persons presenting themselves, and to report the findings on the special blanks that may be secured from your county secretary. An extra blank will also be found in the July and August Journals—see advertising pages. Please mail these blanks promptly so that the results may be announced in the Committee's report at the Annual Meeting.

United co-operation and interest will cause this day and the movement back of it to be productive of the greatest good. Will you not individually assume the responsibility in your county? Interview the editors of your local papers. Ask them to give this day publicity so that the greatest number of people in your community submit to examination. Have your mayor or village president issue a special proclamation. Interest the clergy and request them to make an announcement at all their services on the Sunday previous to August 20th. The widest publicity possible is desired. Will you not obtain it by your help?

We as a state and profession are again in the lead in presenting this method of attack in the movement that seeks to eradicate tuberculosis. It is incumbent upon every member to make this a successful undertaking. We need your aid, enthusiasm and services. The end result is dependent upon the physicians of the state. Again we urge your interest and support. Kindly refer to the July Journal for all the details.

#### TUBERCULOSIS DAY.

While even the most optimistic anti-tuberculosis workers should not look for any unanimous action on the part of the physicians in extending to the public, or the public in availing themselves of medical examinations without charge to ascertain who has symptoms of tuberculosis, as requested in the Governor's proclamation naming Friday, Aug. 20, 1915 as Tuberculosis Day, still this extending to the rural districts, if even for only one day, the advantages of the free tuberculosis clinic constantly enjoyed in cities in Michigan of over 100,000 population is but one example of the advanced stand in sanitary and hygienic matters taken by the present governor of this state. The free tuberculosis clinic and the visiting tuberculosis nurse will discover unsuspected cases of the disease, and the publicity given the work and to the danger of infection by these two agencies will arouse the people to the necessity of isolating each focus of infection.

This brings us face to face with the necessity of providing as many sanatoriums as are necessary to provide accommodations for as many patients as are willing or can be induced to accept admission thereto. Observe the use of the word "accept" and not of the word "seek." While most of our patients could afford to pay for hospital accommodations for the few weeks necessary for treatment of a case of appendicitis, typhoid or scarlet fever, very few can afford the expense of the two years necessary for the treatment of a case of tuberculosis. So our tuberculosis patients should not be advised to seek admission to a sanatorium but the privileges of the sanatorium should be freely extended to them, and they should be given to understand that they are conferring a favor on the community in accepting said privileges, bearing in mind at all times that the prevention of contagion is of more importance than the cure of the disease.

From the standpoint of the patient as well

as from the standpoint of the community the value of the tuberculosis sanatorium as an educational unit is underestimated. From the standpoint of the patient for the reason that patients who have been inmates of tuberculosis sanatoriums invariably on returning to their homes continue the precautions necessary for the avoidance of contagion, and by their example are an object lesson to others in the importance of hygiene; and from the standpoint of the community for the reason that wherever a tuberculosis sanatorium has been established in a community, interest in the control of the disease advances by leaps and bounds.

So let us all unite in making "Tuberculosis Day" a day in which the privileges of the free tuberculosis clinic will be extended to all the people of the state, and after this day has passed let us continue our efforts until an absolutely free tuberculosis sanatorium is established in every community in the state. Let us impress the fact upon the minds of the people that the community and not the patient is the greater beneficiary thereof and that the community should pay the bills.

W. J. O'REILLY.

#### FEE SCHEDULE.

To the Members of the Michigan State Medical Society:

That a satisfactory fee bill may be secured to be used in connection with the Workmen's

Compensation Law, the following draft of a medical and surgical fee bill is being submitted to each county society for an expression of approval or disapproval.

The committee having this fee bill in charge desires each county society to take action upon it before the annual meeting that the delegates may voice their opinions at that time.

The work of the committee has been unavoidably delayed for some months owing to an effort having been made during the recent session of the State Legislature to make some changes in the Workmen's Compensation Law.

The fee bill has been worked out from the New York, California and Ohio state bills—the best bills so far formulated.

None of these bills are more liberal, and in a number of items are not so liberal as the proposed bill enclosed. The Committee, therefore, hopes it will meet with your approval.

In considering our own interests we, of course, cannot lose sight of the interests of the employers and employees of our varied state industries, and the interests of the accident insurance companies, and also of the fact that whatever scale of fees may be satisfactory to the medical men of the state, must meet the approval of that Industrial Accident Board at Lansing before it can be put in effect.

C. B. STOCKWELL, Chairman

F. C. WARNSHUIS

B. M. DAVEY

Committee.

#### MEDICAL AND SURGICAL FEE BILL.

##### SCHEDULE OF RATES.

Recommended by the Committee appointed at the last meeting of the Michigan State Medical Society to revise the present schedule and to submit such revision to each county society of the state for adoption or rejection.

SPECIFIC INJURIES	A Flat Rate First Aid Operation and treatment for three weeks	B Operation only	C Total Limit Full subsequent treatment for three weeks Additional to Column B only
AMPUTATIONS—			
Hip .....	75.00	50.00	25.00
Thigh .....	50.00	35.00	15.00
Foot .....	50.00	35.00	15.00
Leg .....	50.00	35.00	15.00
Shoulder Joint .....	55.00	40.00	15.00
Arm, forearm or hand .....	50.00	35.00	15.00
Metatarsal or metacarpal, one .....	20.00	10.00	10.00
Metatarsal or metacarpal, two or more .....	25.00	15.00	10.00
Finger or toe, one .....	15.00	10.00	5.00
Finger or toe, two or more .....	20.00	15.00	5.00
Ankle Joint .....	50.00	35.00	15.00
Knee Joint .....	50.00	35.00	15.00
Elbow Joint .....	50.00	35.00	15.00
Wrist Joint .....	40.00	25.00	15.00

SPECIFIC INJURIES			
	A Flat Rate First Aid Operation and treatment for three weeks	B Operated only	Total Limit Full subsequent treatment for three weeks Additional to Column B only
FRACTURES—			
Upper arm .....	40.00	20.00	20.00
Forearm, one bone (shaft) .....	20.00	10.00	10.00
Forearm, both bones .....	35.00	25.00	10.00
Forearm, Colles' .....	25.00	15.00	10.00
Femur .....	50.00	25.00	25.00
Lower leg, one bone .....	35.00	20.00	15.00
Lower leg, both bones .....	40.00	25.00	15.00
Jaw .....	25.00	15.00	10.00
Ribs, one or more .....	10.00	5.00	5.00
Patella .....	40.00	20.00	20.00
Pubic bone .....	20.00	5.00	15.00
Acetabulum .....	50.00	20.00	30.00
Metatarsal or metacarpal .....	5.00	2.00	3.00
Fingers, one or more .....	10.00	5.00	5.00
Toes, one or more .....	10.00	5.00	5.00
Coccyx .....	15.00	5.00	10.00
Sacrum .....	15.00	5.00	10.00
Sternum .....	10.00	5.00	5.00
Spine .....	75.00	50.00	25.00
Lacrymal bone .....	10.00	5.00	5.00
Malar bone .....	10.00	5.00	5.00
Scapula .....	20.00	10.00	10.00
Clavicle .....	20.00	10.00	10.00
Nasal bone .....	10.00	5.00	5.00
Compound fracture 25 per cent. extra.			
Operation for wiring of bones or plating 50 per cent. extra.			
DISLOCATIONS—			
Shoulder .....	20.00	10.00	10.00
Elbow .....	15.00	10.00	5.00
Wrist .....	15.00	10.00	5.00
Hip .....	25.00	15.00	10.00
Knee .....	20.00	10.00	10.00
Patella .....	15.00	10.00	5.00
Ankle .....	20.00	10.00	10.00
Clavicle .....	15.00	10.00	5.00
Fingers, one or more .....	3.50	1.50	2.00
Toes, one or more .....	5.00	2.00	3.00
Jaw .....	10.00	5.00	5.00
Ribs, one or more .....	5.00	3.00	2.00
Spine .....	50.00	25.00	25.00
Sternum .....	5.00	3.00	2.00
Coccyx .....	10.00	5.00	5.00
Metacarpal, one or more .....	5.00	3.00	2.00
Metatarsal, one or more .....	10.00	5.00	5.00
Carpal, one or more .....	5.00	3.00	2.00
Tarsal, one or more .....	10.00	5.00	5.00
Scapula .....	15.00	5.00	10.00
Pelvis .....	10.00	5.00	5.00
SPECIAL AND MISCELLANEOUS OPERATIONS—			
Trephining of skull .....	75.00	50.00	25.00
Laparotomy for traumatic peritonitis .....	75.00	50.00	25.00
Fixation or suturing of kidney .....	75.00	50.00	25.00
Laparotomy for rupture or wound of bladder .....	60.00	50.00	10.00
Laparotomy for rupture or wound of liver .....	75.00	50.00	25.00
Laparotomy for rupture or wound of spleen .....	75.00	50.00	25.00
Laparotomy for rupture or wound of stomach .....	75.00	50.00	25.00
Laparotomy for circumscribed aneurism .....	75.00	50.00	25.00
Trephining bone abscess .....	25.00	15.00	10.00
Caries or necrosis, removal of .....	25.00	15.00	10.00
Tracheotomy .....	40.00	25.00	15.00
Intubation .....	15.00	10.00	5.00
Rupture of abdominal wall .....	40.00	30.00	15.00
Nerve, section or suturing of .....	10.00	5.00	5.00
Injection of antitoxin for tetanus or hydrophobia, each treatment \$ 5.00.			
Total not to exceed .....	25.00		



## SPECIFIC INJURIES

## SPECIAL AND MISCELLANEOUS OPERATIONS—Cont.

	A Flat Rate First Aid Operation and treatment for three weeks	B Operation only	C Total Limit Full subsequent treatment for three weeks Additional to Column B only
Anthrax-cauterization or excision .....	25.00	10.00	15.00
Ligating important arteries (separate operation) .....	20.00	15.00	5.00
Ligating small arteries (separate operation) .....	8.00	5.00	3.00
Hernia-reduction by taxis and applying truss (subsequent treatment, none) .....	5.00		
Herniotomy .....	50.00	40.00	10.00
Enucleation of eyeball .....	40.00	25.00	15.00
Laminectomy (special operation) .....	75.00	50.00	25.00
Paracentesis, thoracis or pericordi (special operation) .....	15.00	10.00	5.00
Rupture of tendon, large .....	10.00	5.00	5.00
Rupture of tendon, small .....	5.00	2.50	2.50
Abscess, incision .....	4.00	2.00	2.00
Minor operations, repair of small wounds including subsequent dress ....	5.00	2.00	3.00
Repair of large wounds including suturing and dressing .....	10.00	5.00	5.00
Introducing catheter .....	2.00 to 5.00		
Removal of ordinary foreign body conjunctiva at office .....	1.00		
Removal of foreign body from cornea .....	1.50		
Subsequent treatment at office .....	1.00		

## SPRAINS—

Shoulder .....	5.00	2.00	3.00
Elbow .....	5.00	2.00	3.00
Wrist .....	5.00	2.00	3.00
Hip .....	5.00	2.00	3.00
Knee .....	5.00	2.00	3.00
Ankle .....	5.00	2.00	3.00
All other joints .....	3.00	1.00	2.00

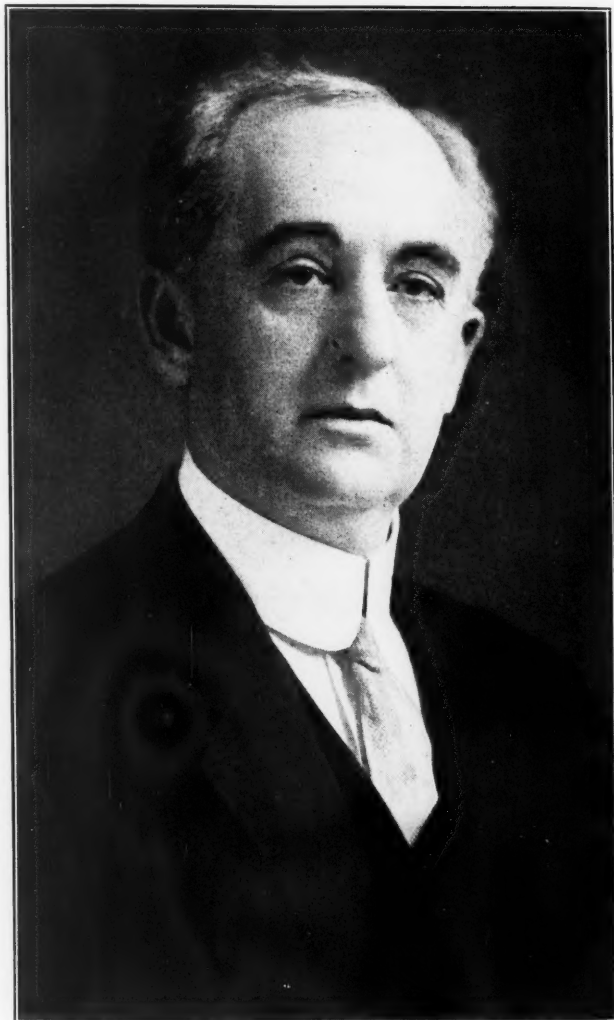
## MISCELLANEOUS ITEMS:

Assisting at operation, major .....	10.00 to 20.00
Assisting at operation, minor .....	2.00 to 5.00
Examination in lunacy, including written report and one day's attendance in court or before commission .....	50.00
Subsequent court at commission attendance, for day .....	25.00
Urinalysis, when specially requested .....	2.00
Complete physical examination and report of other than attending physician \$5 plus laboratory fee.	
Autopsy, complete with written report .....	50.00
Autopsy, attending but not performing .....	10.00
Microscopical and chemical analysis of organs .....	25.00 extra
Testimony in court or before commission as to simple fact of injury .....	10.00
Testimony at coroner's inquest .....	10.00
Expert testimony, per day .....	15.00 to 30.00
X-Ray picture, including plate .....	5.00 to 10.00
General anesthetic, administration of .....	5.00 to 10.00

	First Aid	Subsequent Treatment, Office
--	-----------	------------------------------------

## ORDINARY ITEMS—

Ordinary day visit at house, mile limit from office, including antiseptic dressing when necessary .....	2.00	1.00
Ordinary day visit at hospital, including antiseptic dressing when necessary .....	1.50	1.00
Visit including antiseptic dressing and necessary operative procedures in ordinary cases of incisions, punctures, lacerations or contusions .....	3.00	1.00
Night visit, 9 p. m. to 7 a. m., add to day visit .....	1.50	
First attention at office, including operative procedure and dressing of ordinary wounds .....	1.50	1.00
Ordinary office treatment, including antiseptic dressing when necessary .....	1.00	1.00
Formal detailed report by attending physician at special request of insurance company .....	1.00 to 1.50	
Mileage beyond one mile limit, per mile one way .....	.50 to 1.00	



**REUBEN PETERSON**

**PRESIDENT**

**1914 - 1915**

## COUNTY SECRETARIES.

In the official program you will notice that the Seventh Annual Meeting of the County Secretaries Association will be held at 5 p. m. on August 31 in the Peninsular Club. The Association will be the guests of the Council at dinner at 6:00 p. m.

You, by virtue of your office as county secretary, are a member of this Association. You are not only invited but expected to attend. Attendance at this meeting is one of the duties of your office and a duty you owe to the members of your local society.

In the past it has been customary to devote the afternoon to the discussion of the problems that confront a County Secretary. They have been exceedingly helpful meetings and those present have received numerous suggestions as to how best perform their official duties as well as how to arouse interest in the meetings of their respective societies.

This year it is proposed to hold a short business session and then adjourn to the dining room for a "Round Table Discussion" during the dinner. President C. B. Fulkerson and Secretary J. A. Wessinger have arranged an interesting series of questions that will be presented informally and the ensuing discussion will assuredly be interest awakening and instructive.

It remains with you, Mr. Secretary, to cause this meeting to result in the greatest amount of good. Your presence is very essential. You must permit nothing to prevent your attendance. Will you not at once write Dr. J. A. Wessinger of Ann Arbor and tell him you will be there?

If you have the interest of the state and your local society at heart your chair will not be vacant. Come and meet your fellow secretaries and discuss with them the problems that confront all of us. Returning home you will be able to better enact the part expected from you by your county society.

## FIFTIETH ANNIVERSARY.

### OUR PAST; OUR FUTURE.

The Annual Meeting in Grand Rapids this year marks the fiftieth year of organized medicine in Michigan. It is the Society's golden celebration. It closes an epoch and is the commencement of a new era in the history of the profession in Michigan.

The chapters that have been written by those

who actively participated in the work of the years that have elapsed are resplendent with activities which we may proudly look back upon. They record a series of professional progress, honorable performance of duty and a "meeting-up" to a standard consistent with our dignity. Our Society has well attained its purposes.

To review the past in detail is impossible. To point out certain beacon lights is beyond our capability. President Peterson, in his presidential address, proposes to cover, along certain lines, the achievements of the past fifty years. We have contented ourselves by asking some of the older members to submit their reminiscences for publication. They are here imparted as are also some thoughts from other members as to what the future may hold in store for us.

Fifty years in the life of an individual compasses the span of his intelligent activities, but fifty years in the life of the Michigan State Medical Society has but brought it to the point where it can view the vast fields of labor which it should occupy, and has rendered it conscious of the power and ability to so occupy them. The life history of all medical societies seems to pursue somewhat of a similar course. First we have the organization born of the enthusiasm and hope of a few energetic souls; then the winds of adversity appear and the frail bark is driven hither and thither among the rocks and shoals of malicious criticisms, unbrotherly acts, open jealousies, and political intrigues until, escaping these, she at last emerges into the calmer waters created by the wiser councils of a reorganized medical profession.

The life history of the Michigan State Medical is no exception as one may judge by reading the records transcribed in our *Medical Journal* of last year by Dr. A. F. Jennings. I have been told that had it not been for the devotion of the medical men of Ann Arbor and Detroit, with very little help from the rest of the state, the organized society would have gone to pieces. Today this State Society governs the consciences and receives the homage of nearly every eligible physician in the state.

Who were those wheel horses of the early days? I count myself fortunate indeed to have had the acquaintance and friendship of some of them. May I mention Sager, Palmer, Ford, Wells, of Ann Arbor; Pitcher, Farrand, Noyes, Jenks, Heaton, of Detroit; Foster, of Kalamazoo; Camp and Griswold, of Grand Rapids;



Northrop, of Marquette and Fuller, of Houghton. Certainly a goodly array of sainted names!

The first named, Dr. Abram Sager, was our family physician, and many was the time I rang his night bell to summon him in haste. He was our constant attendant for many years in sickness and in death. And the recollection of his kindly face bending over me when as a youth I was desperately ill with typhoid fever remains with me still, as do also several scars in my right iliac region made by the vigorous counter-irritation. Let me relate a little anecdote. My most vivid recollection—or was it only hearsay—of that illness was the great desire for water. In delirium or out of it, water, water was my cry. Not only a cup, but a dipper full, a pail full, a barrel full! There was not enough water in all the wells and rivers for my need! When somewhat better, my sister found in a child's paper this bit of doggerel which pleased me mightily and we had Dr. Sager read it. It ran:

"More water, more water!" cried Michael McWhorter,  
"I'm as dry as a withered old stump;  
And I verily think, I this moment could drink  
To the bottom of well or of pump."

The doctor laughed, and I got the water. Many and many a time when my typhoids would ask me for water have I repeated this jingle to their infinite amusement. But alas! for them the point was gone—there was no application on't. I have always given my typhoids all the water they wanted!

THEO. A. FELCH.

My thoughts often hark back to the first meeting which I attended of the Michigan State Medical Society. It was held in Lansing, in the Capitol Building, in the late seventies, and was presided over by Dr. Foster Pratt, of Kalamazoo, a man of great learning, of strong convictions, and a master of English. The subject of his Presidential address was the Newcomer-Van Deusen case which had not long before been fought out in the courts with great skill and not a little acerbity on both sides. Mrs. Newcomer had sued Dr. Van Deusen for illegal detention and the case became a Michigan *cause celebre* in medical jurisprudence, the like of it not having occurred theretofore. At that time there was no general statute governing the admission of patients who came to the then called asylums of Michigan on orders from the superintendents of the poor or other more or less informal documents. Dr. Van Deusen had been subjected to much unmerited criticism and

his reputation had suffered not a little. Dr. Foster Pratt in his ringing address made it perfectly clear how unjust had been the allegations and showed conclusively the good intentions and high aim of the officers in charge of public institutions for the insane in general and of the Michigan Asylum at Kalamazoo in particular. I say he showed it conclusively; he did at least to my mind. As a boy, I had never been in contact with the insane and had known no patient thus afflicted except a neighbor of whose conduct and care at Kalamazoo the wildest neighborhood yarns had been in existence. I did not look upon asylums as medical institutions but as places for custodial care of a difficult class of citizens. As a medical student, my vision had not been broadened on the subject. There had been no chair of psychiatry, no teachings of this branch, no clinics, nothing to acquaint the soon-to-be medical practitioner with an important branch of his profession. Dr. Pratt's masterly address clarified my thinking quite completely and when a few months afterward, Dr. Hurd offered me a position as assistant physician to the Eastern Michigan Asylum at Pontiac, I accepted it gladly and entered upon the work with quite the same feeling that would have moved me had the invitation come from a general hospital. It all goes to show that much may be made of a presidential address if its author selects a timely topic and one of large interest. Among other subjects those relating to medical jurisprudence, to the discussion of rules of evidence and decisions in malpractice cases—all from the physician's viewpoint—are especially important.

The Michigan State Medical Society in those days might be likened to a delightful old beer garden. There were rows, riots, and rumpuses and then some. At the University of Michigan, homeopathic students received instruction in surgery, in ophthalmology, in obstetrics and certain other branches from the teaching staff of the College of Medicine and Surgery. This latter staff was the object of unintermitting and sanguinary bombardment by a faction of the State Medical Society of which the late Dr. William Brodie of Detroit, a rare and delightful character who once remarked to me, "I don't care a —— whether I fight with the majority or the minority so long as I fight," was acknowledged field marshal. The emplacement of their siege guns was good, their fire effective in so far as laceration of feelings and incitement to battle were concerned. They did not succeed, however, in dislodging the enemy from

the trenches which were successfully defended by the Ann Arbor contingent led by Drs. Maclean and Frothingham. These latter never accepted a state of siege as final but made daring and brilliant sorties from the works, somewhat to the damage of the serried ranks of the attacking force. There were neutrals also who wondered what it was all about and who ducked active participation in the hostilities. That it was much ado about nothing is now altogether obvious and the present generation of medical students would find it difficult to picture the state of mind of the leaders in this engagement who moved to and fro upon the earth, armed *cap-a-pie*, growling, uncompromising, belligerent. It was for a "principle" they were contending. How easy it was to find a "principle" as the ground of contention! How unimportant this fray appears in the light of the present day understanding. It is interesting to add that the active participants in this warfare lived to bury their animosities and were all fast friends before the close of their distinguished careers.

C. B. BURR.

#### THE REORGANIZATION OF THE MICHIGAN STATE MEDICAL SOCIETY IN 1902.

In 1901 a radical change was made in the form of organization of the American Medical Association by which the legislative work of that body was reposed in a House of Delegates, to be composed of delegates from affiliated state societies in number proportionate to the membership of such state organizations, and a recommendation was made that the several state societies should adopt this form of organization for themselves. Accordingly, in 1901, the new President of the Michigan Society was instructed to investigate the new form of organization and present recommendations at the 1902 meeting. Fortunately the Society had for its President one who was eminently fitted for this special work—the late Leartus Connor. The heart and soul of this unselfish great Michigan physician were absorbed in the work of perfecting an organization of his fellows that would in every sense of the word be representative of the entire profession of the state. He reasoned that the physician, no matter how gifted he might be, no matter how honorable in his dealings with his fellows and the public, could not hope to occupy in the public esteem a very much higher position than the average attained by the profession of the entire state;

that the public regard for the educated and honorable men would depend much upon the fact that the average status of the whole profession was high and honorable.

Previous to 1902 it had been made difficult for ordinary men to become members of the State Society and also of many local organizations. Strict investigations were made of each candidate's fitness to become a member and it is feared that local jealousies often operated to keep worthy men out. The consequence was that the membership of the State Society was small and it had very little influence upon public questions.

President Connor appointed a special committee consisting of Drs. A. E. Bulson, George Dock and Chas. T. McClintock, to study the subject and make recommendations at the 1902 meeting. The committee worked faithfully in connection with President Connor and their report was adopted in June, 1902 by a practically unanimous vote, and the Chairman of the committee was elected the new President of the Society.

In the subsequent organization of the Council which was charged with the duty of organizing the County Societies, Dr. Connor was elected Chairman, Dr. Andrew P. Biddle was the Secretary of the Society and the first editor of *The Journal*, the first number of which appeared in Sept. 1902. Dr. W. H. Haughey was the first Secretary of the Council and to these men, Drs. Bulson, Connor, Biddle and Haughey, are we indebted for much unselfish labor. Each of them held himself open to call at any time to visit any place in the state when the local Councilor needed assistance.

Personally I have many pleasant recollections concerning that pioneer organization work in 1902 and '03, but most of all I treasure the memories incident to my association in that work with the four gentlemen I have named above. I treasure especially the memory of the one who has passed away. To him I feel indebted for whatever broad and liberal views I may have been able to acquire concerning the relations of medical men with one another.

The results of the work begun in 1902 are recorded in the volumes of *The Journal*. Started by the first Council with much fear and trembling, it has steadily progressed to the present time. Each year it is made a little better, keeping step with the ever improving status of the profession of the Wolverine state. Thus shall it continue to do in the future, being ever

a more or less faithful mirror of the profession which it entertains and represents.

W. T. DODGE.

Previous to the time of the vigorous propaganda by Editor Simmons and his associates for the systematic organization of our profession, there was no medical society worthy of the name in the Upper Peninsula. A few widely scattered members of the state and still fewer of the National Association.

This was not alone due to a lack of desire, but it meant a journey of not less than one thousand miles, with the attendant loss of time and money, which many of us could ill afford. I well remember attending several meetings of the State Society when I was the only representative of the Upper Peninsula, not representing any County Society, for none was in existence at that time. We were practically isolated from one another, only meeting on rare occasions in consultations or rendering assistance. Our only source of keeping abreast of the advancement of medical progress was in the reading of books and journals.

We had none of the incentives to do better work which one gets by meeting with men engaged in his own line of work, in taking part in the discussion of papers, and above all, the enjoyment of good fellowship which a good Medical Society engenders.

This condition of isolation has all disappeared and we now have six live working County Societies, with a membership of at least 60 per cent. of all regular practicing physicians; also an Upper Peninsula Society, meeting once a year. To attend these meetings demands from some of the members, sacrifice of time and much effort, but it is freely and cheerfully given.

This systematic organization has not only brought into fellowship, but also into existence a firm determination of every member to do all in his power to advance the cause of Scientific Medicine and Public Health.

Instead of one or two attending the State Association, we now have many times that number and each one so attending makes a firm resolve not to miss any future meeting if at all possible to attend.

I am firmly convinced from the progress made by this systematic propaganda, carried on by our efficient County, State and National officers, and much individual effort, the time is not far distant when practically all pro-

gressive physicians will be members of one great band engaged in "God's noblest calling."

A. I. LAWBAUGH.

#### THE MEDICAL SOCIETY OF TOMORROW.

We celebrate this year the 50th anniversary of the foundation of the Michigan State Medical Society. Fifty years ago transportation of all kinds was very difficult. For our forefathers even to meet with one another meant a sacrifice of time and labor hardly now appreciable. The few who gathered together needed all their energy to be devoted to the welfare of the profession. Gradually with time and increasing facilities for meeting organization has been perfected; the County, the State and the National Association today are the centers of thought and action of the profession; but now with an enlarging and more exacting population the expectations of civilization of the profession have enormously increased, and the medical society of tomorrow must be ready to meet these expectations. Its members must be highly educated and highly trained that each in his community may be a leader ready to sacrifice time, means and health to enlighten the people in every thing which pertains to the preservation of the public health; courageous in maintaining our highest ideals and fearless in the protection of public morals.

The field is vast, covering from the prenatal period to beyond the burial. Child welfare in its broadest educational, physical and moral sense; the care of the defective; the recognition that the criminal and the inebriate are but types of diseased mental and physical conditions, to be treated accordingly; the protection of the public health in city and rural districts by full time, well educated, and especially trained sanitary engineers and physicians; the education of the public in the prevention of disease and the individual in the care of himself; the teaching that a moral life, free from the use of stimulants and of excessives, is the one most conducive to the happiness and well being of self and of the race; are but instances of what may be done.

And, as we meet these issues fairly, so will our profession be held in increasing esteem and gain in usefulness to mankind, the highest fulfillment of a life of action and trust. *Noblesse oblige.*

ANDREW P. BIDDLE.

On August 10, 1819, the Medical Society of the Territory of Michigan was organized to



regulate the practice of medicine. This was the beginning of Scientific Medicine in Michigan. April 14, 1849, the Wayne County Medical Society was organized, and other societies came and gradually dissolved, until in 1865 the Michigan State Medical Society was organized, and Dr. Stockwell of Port Huron was made President. Then came Dr. Jerome, Dr. DeCamp, and our own Dr. Richard Inglis of Detroit, who was President in 1869. Then came Drs. H. O. Hitchcock, and J. W. Jenks. Dr. Jenks acquiring the national reputation as a gynecologist, Foster Pratt, a great orator, and the real father of our present immigration laws, requiring the exclusion of diseased persons. Drs. N. D. Stebbins, who was a great botanist, and Zina Pitcher, who is always quoted in books of obstetrics, as the originator of the hot water injections in postpartum hemorrhage.

I joined the Society shortly after graduating, and we had great old times. Very good scientific work was done, but there were factions and oratories. Michigan was the dumping place for all the quacks of the country, as we had no laws, and for years we worked with the Legislature, but the so called Homeopaths, Eclectics, and others always opposed us, but finally we got a law passed requiring all physicians to register with the County Clerk, and to state where they graduated, and if not. Thus there would be a record so people could find out whether they had a regular graduated physician, no matter what a meagerly school he might come from. We had great fights about creating a Homeopathic Medical Department at Ann Arbor, but it was accomplished, and I think was really a good thing to cause the downfall of sectarian medicine, for as soon as students learned anatomy, physiology, chemistry, etc., they soon found there is no exclusive practice of medicine. The great work of the State Society has been its constant endeavor to elevate the practice of medicine in this state.

Finally, however, we came together and with the late Drs. E. L. Shurly, H. O. Walker, and myself, and some others from different parts of the state, and agreed with the Homeopaths, Eclectics, etc., to have a State Board created, as it is now constituted. The object being to require that all men who wanted to practice medicine, to show that they knew something about it, and were competent, not ask them what therapeutics they would employ. We treated them all square. I remember the long session we had with the Legislature until twelve o'clock one night, and then took the two o'clock

train from Lansing to get home. But the bill passed, and has since then been improved, and we now have as rigid a medical act as there is in the country.

The State Medical Society has been in the front ranks to elevate medical education, to stamp out tuberculosis, and teach public hygiene. With the highest grade of medical men, the fightings, squabblings, and politics have been relegated to the background, and today the State Medical Society is simply a scientific body to help each other in their noble occupation.

J. H. CARSTENS.

Few of us will be here to see the changes in 1965 and those who do survive will probably have reached Shakespeare's seventh age of man—"sans teeth, sans hair, sans everything." But the evolution of man is found to apply to all of his accomplishments and one may take a reasonable certain peep into the future if he observes the tendencies of the age in which he lives. Following this method, we might predict a strongly prophylactic or educational movement, gathering strength as it becomes sure of itself and sure of the support of the people, until the pronouncements of the official representatives of medicine are regarded with fully as much respect and veneration as are those of our cattle experts at the present time. This may seem to many a bold statement, but if it is once realized a number of results of the utmost importance to mankind will immediately follow. The sterilization or segregation of the physically unfit; the stamping out of idiocy and degeneracy, and the practical elimination of venereal disease will then be as easily accomplished as was the suppression of the foot and mouth disease among cattle in 1914. What we need is true medical education—not merely a few talks to mothers on how to handle a teething baby, but how to prohibit the propaganda of her species to the unfit human animal. And this will never be realized until governmental medical authority backed by a majority of the people with power like that of a Colonel Goethals performs its stern, pitiless yet merciful mission. And this, it seems to me, is possible in fifty years from now.

FRANK C. KINSEY.

When medical men first began to lay a foundation for unanimity, friendship and culture, they organized themselves into County Medical Societies. The larger organization of fifty years

ago, our Michigan State Medical Society, was the natural sequence of a grouping of the smaller ones, thus the County Medical Society became the unit of the State Association. In some instances the number of medical men in some counties were too small to form a good working organization. Two or more counties were grouped together to improve their organization, to arouse interest and dispel the lethargy into which the profession had lapsed. This action has been vindicated in the majority of instances where this plan has been adopted, by increase of membership and activity of the society by better programs, by increase of general average attendance and by developing a friendlier spirit in the medical profession.

Few have seemed to recognize this phase of medical organization. Because of the complexity and rapid progress of medical work and increase of the standard of requirements of medical men the demand for efficient organization and society work is very great. In fact the organization must be successful in obtaining first class talent for the programs or the attendance and the membership immediately drop to an insignificant number. First class programs made up of imported talent will rejuvenate any dead society and uncover talent in the profession long believed extinct. When the medical society is properly developed one is greatly surprised at the amount of local material at its disposal.

The success of our organization will be far greater if the size of our units could be extended so as to include three or more counties; more of the eligible men in the state will give their support, our legislative power will be enhanced, the community will be served more efficiently and in the medical fraternity a friendlier spirit will prevail.

This celebration of the Fiftieth Anniversary of our State Organization should stimulate us to greater and more concerted efforts to awaken in the individual his responsibility not only to his patients but to medicine. We should meet the demands of the century and make our organization so indispensable to every practicing physician that he cannot live without it.

C. B. FULKERSON.

I have not learned the art of passing into a trance and viewing the future. However, the history of the past fifty years of the Michigan State Medical Society is so varied and full of interest as to furnish inspirations for making the future many fold times more eventful than

has been the past. The mistakes which have been made must be avoided. To err is human, but it is unpardonable to repeat a blunder. For this reason the events during the fifty years existence of this Society are important and should be of great value in years to come. The committed errors must be omitted and the good increased many fold.

Compared with advantages we enjoy today, those of our predecessors were very meagre. The opportunities for thoroughness were so limited, yet the years have not been uneventful—quite the reverse. If the next half century is to be relatively as important, wonderful dreams and ambitions must be realized.

Today the young practitioner enters the field far better equipped than did his predecessor. These extra talents must be accounted for in direct ratio to their attainments. The public justly demands more efficiency and as the State Society figures so forcibly in furthering this factor, it is not difficult to fathom the part this body must play during the years to come.

Co-operating as it does with our greater organization, it serves as a mediator between our local societies and the larger body. This necessitates each individual County Society to do its part in the way of keeping its members in the front ranks. The stimulus for good work is effective only to such a degree as the individual members are simply "natural practitioners," or those who have ambition to keep abreast with the eventful period in which we live. Were we to depend upon ourselves for this incentive, there would be a large army falling by the wayside of development.

The results of the labors of the State and National Councils of Education have already been noted, but limitations must soon be met with, otherwise there may be a hidden danger of finding the next decade devoid of the general practitioners and various specialists supplanted in their stead. While this may be ideal, yet it is questionable as to the willingness of the public to accept this change. Time alone will tell. If the change must be made, it should be gradual.

The State Society plays an important role in moulding individual careers. Through its medium, *The Journal*, the more important transactions are related and tabulated. In this connection it is justifiable to commend our excellent *Journal*. If it continues to make rapid strides forward as during the past two years, the pride we now hold and the benefits derived will be increased many fold. We must not expect the

Editor to shoulder the whole burden; if every member would contribute his mite, the articles would not only become more varied but a greater personal interest would predominate throughout.

The State Society Protective Department has wielded a healthy influence. The fraternal spirit fostered has been instrumental in preventing many prosecutions, formerly so common. Surely it is unworthy of a physician to publicly find fault with his fellow practitioner. We can all recall instances where a man has been haled into court not so much for reason of his inability and faulty practice, but solely because a jealous colleague saw an opportunity to besmirch his good name. In order that the State and County Societies may prosper during coming years all petty jealousy between local practitioners must be relegated to the side lines. Nothing but harm can come from these strifes. The public looks upon them as foolish and puerile. The more we co-operate, both in practice as well as outside, the better will be the results attained. If this energy were spent in common protest against fraudulent cults, much good would be accomplished and more beneficial legislation would be formulated.

The movement on foot to establish a circulating medical library for the use of the members is commendable and if realized will bear choice fruit. We have access to the A.M.A. periodicals and other literature, but the body to be supplied is too great for efficiency. If the State Society can grant similar privileges, the doctors of Michigan will be able to further many ideas now impossible because of the necessarily large personal expense.

Finally, the profession, especially the members in smaller localities, are in need of more extensive laboratory facilities than are now offered by the State Board of Health Laboratory. If the State Society could be instrumental in persuading the State Laboratory to include the Wassermann and other tests in its list, much would be accomplished, as today many cases must be satisfied with a clinical diagnosis.

Greater activities are necessary upon the part of all in order that the progress of the Michigan State Society may be forward. The individual and common gain will be ample reward.

RUDOLPH J. E. ODEN.

*E-Lep-Tinc.*—E-Lep-Tinc is an "epilepsy cure." According to the Indiana State Board of Health, it contained sodium and potassium bromides 16 per cent., alcohol and ammonium valerate (*Jour. A.M.A.*, June 12, 1915, p. 2006).

## Editorial Comments

In this issue there will be found the program and announcements for the Fiftieth Annual Meeting to be held in Grand Rapids, August 31, September 1st and 2nd. He would indeed be an unfortunate member were he compelled to forego participating in and profiting by this convocation. Every detail of the entire program is prophetic of a most profitable meeting. The Grand Rapids profession cordially urge you to be their guests throughout the entire session. This should be our truly banner meeting.

Essayists are reminded that their paper must be handed to the Section Secretary as soon as read. Please have your paper typewritten, double spaced, with title, author's name and section before which it was read. Avoid abbreviations.

The ladies are most cordially invited. Grand Rapids affords them numerous opportunities for shopping and entertainment.

There will be plenty of the local profession on duty at all hours to impart any desired information. Don't hesitate to ask them. They will be distinguishable by special badges and their services are at your disposal.

The points of interest in Grand Rapids are described elsewhere in this issue.

To recapitulate, they are:

1. Furniture exhibits and factories.
2. Y. M. C. A. building, just completed at a cost of \$300,000.
3. Ryerson Public Library.
4. New Pantlind Hotel.
5. District Nursing Association building.
6. John Ball Park and drive.
7. Water Filtration Plant.
8. Reeds Lake and Ramona Park. Summer vaudeville and amusements.
9. Michigan Soldiers Home.
10. Boulevard Drive.
11. Masonic Temple, \$350,000, process of erection.
12. Butterworth, U. B. A. and St. Mary's hospitals.
13. Kent Country Club, Plainfield Auto Club, Highlands Country Club, Peninsular Club and Owashtanong Club.
14. Retail shopping places.
15. Ottawa Beach and Macatawa Park, Summer Resorts on Lake Michigan. One hour's ride on Holland Interurban.



## RAILROADS:

1. Pere Marquette.
2. Grand Rapids & Indiana.
3. Michigan Central.
4. Grand Trunk.
5. Lake Shore.
6. Holland and Chicago Interurban.
7. Grand Haven and Muskegon Interurban.
8. Grand Rapids and Kalamazoo Interurban.

You must not permit yourself to fail to attend this meeting. Carefully peruse the program and you will readily perceive why.

Post a notice in your office that you are going to be in Grand Rapids Aug. 31, Sept. 1 and 2.

Don't cause your community to forego the benefits of Tuberculosis Day. A little effort will be required but the committee deserves this co-operation.

If there is any need for some of our standing committees there should at least be some activity amongst them. We surely hope that they will abandon President Wilson's slogan of "Watchful Waiting."

Your consideration of our advertisers and the determining to patronize them is respectfully solicited.

Grand Rapids, August 31, September 1 and 2 are dates we want you to bear in mind.

"One reason we are not always successful is that we sidestep the opportunity of a vacation or outing and shake hands with the temptation of dealing out advice and medicines from a shelf worn and dusty attic of information."

*Intravenous Radium Solution.*—Standard Radium Solution for Intravenous Use (Radium Chemical Co., Pittsburgh), is sold in ampules, each containing radium bromide equivalent to 0.05 mgm. radium element and 0.0002 Gm. or less of barium bromide dissolved in 2 Cc. sterile normal salt solution. While the Council on Pharmacy and Chemistry confirmed the claimed composition of this solution so far as concerns the radium content, it refused recognition to the preparation because there is no clear evidence that intravenous injection has any advantage over the other methods of administering radium. The Council holds that on the basis of our present knowledge radium should be used intravenously only by those in a position to study its effects carefully and in an institution equipped with the necessary facilities for such study (*Jour. A.M.A.*, June 26, 1915, p. 213).

*Deaths*

**L. G. Rhodes** of South Haven was instantly killed when his automobile was overturned in a ditch while he was hurrying to make a call.

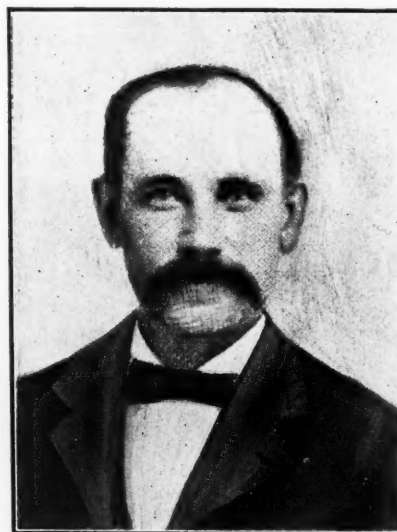
Dr. Rhodes was one of the leading physicians in the southern part of the State and was a former president of the Kalamazoo Academy of Medicine.

**DR. L. G. RHODES, SOUTH HAVEN, MICH.**

Five states were successively the residence of Dr. Leslie G. Rhodes, and in the four in which he lived after reaching manhood, his acquaintance and influence extended considerably beyond the immediate community of his residence and professional work.

Dr. Rhodes was born May 5, 1852 at East Almond, N. Y. He was raised on a farm and attended the district school. In 1867, he moved with his parents to Iowa. He attended the Academy of Kossuth, Iowa and later entered Iowa Wesleyan University at Mount Pleasant from which he graduated in 1877.

He taught school for a time and then entered the medical department of Iowa State University



**Dr. L. G. Rhodes.**

from which he graduated in 1881. He entered upon the practice of medicine and surgery at Alton, Kansas, where he remained ten years. In 1891 he removed to Lincoln, Nebraska, and continued the practice of his profession there until 1896 when he came to South Haven, Mich.

He was a member of the Kansas State Medical Society and the Missouri Valley Medical Association and after coming to South Haven joined the Michigan State Medical Society and the Kalamazoo Academy of Medicine, serving the last-named body as President a few years ago.

In 1890, he was appointed United States Pension Examiner and was chosen President of the board. He was also local surgeon at Alton for

the Missouri Pacific Railroad and at Lincoln he served as a member of the medical staff of St. Elizabeth Hospital, and was also on the surgical staff of Tabitha Hospital.

On coming to South Haven, Dr. Rhodes entered into partnership with Dr. C. D. Carnes, and this association continued for a year and a half. How close were the ties formed during that partnership and in the years that followed it, was evidenced by the request of Dr. Rhodes expressed to his wife some month ago that should he be taken away before Dr. Carnes he wanted the latter to speak at his funeral. Dr. Carnes for his part, found it very sad but withal a satisfying duty to comply with this request and his tribute at the funeral figured largely in making that service so solemn and impressive.

Dr. Rhodes was so busy with his practice that it is difficult to realize that he took so active a part in so many local affairs. He was ready to help any movement that would help others and his energy, persistence and executive ability made him sought as a leader in many of these movements.

Dr. Carnes spoke of the important part taken by Dr. Rhodes in getting the South Haven hospital established. He was one of the first persons, and we believe the first to urge the establishing of a hospital and as Dr. Carnes said, he kept up the agitation, quietly but persistently until it resulted in the starting of the first hospital on Erie street. Then he began work for larger and more suitable and permanent quarters and the present structure at Center and Green streets is a monument to his far-sighted vision of the needs of the community and to his ability and to his persistence and wisdom as he worked with those who made his dream a reality.

It is, perhaps not out of place to recall here his work for the hospital, his interest in the Tag Days and excursions and other efforts which helped to maintain it to remind those who knew him and respected and loved him that while he is gone the institution to which he devoted so much time and thought and energy remains with us, prepared to serve the community and at the same time demanding and deserving continued efforts to maintain it at the standard that good medical and surgical method demand.

His splendid Christian character received fitting tribute at his funeral. He practiced and preached the principles of his faith and he did not spare himself in the services of the churches of that faith.

He was a trustee of the Congregational church and assistant superintendent and teacher in its Sunday School, and later held the same position in the Baptist church and Sunday School. He attended regularly the services so far as his practice permitted and when obliged to be absent his friends knew that he was carrying the gospel

of healing and good cheer and faith in Jesus Christ into some sick room.

He served as President of the Civic Improvement League and of the Lake View Cemetery Association, and gave to both organizations a large amount of unselfish and efficient service.

He was a member of the Board of Trade and interested in all its activities serving on its committees and lending his help to its work wherever opportunity offered.

Dr. and Mrs. Rhodes have been members of the Shakespeare Club since its organization.

Dr. Rhodes was a member of Star of the Lake Lodge F. & A. M.

Dr. and Mrs. Rhodes were married May 14, 1882 at Alton, Kansas; her name was Miss Minnie McHenry, and her parents Rev. and Mrs. F. G. McHenry lived at South Haven for a few years and are pleasantly remembered by many friends.

Besides the widow, Dr. Rhodes is survived by two sisters, Mrs. Alice VanNice of Dayton, Wash. and Miss Mary Rhodes, who lived with them at intervals since Dr. and Mrs. Rhodes came to South Haven. She was at Mediapolis, Iowa, their old home when his death occurred and she came to the funeral accompanied by Miss Rankin, a friend of the Rhodes family for many years.

---

### *State News Notes*

---

#### UPPER PENINSULA MEDICAL SOCIETY SAULT STE. MARIE, AUG. 4-5.

##### Le Sault de Ste. Marie Club Rooms.

##### Wednesday Morning, 11:00 a. m.

1. Meeting called to order by Dr. E. H. Webster, President Chippewa County Medical Society.
2. Invocation.  
Rev. Stephen Alling.
3. Introduction.  
E. H. Webster, Sault Ste. Marie.
4. Address of Welcome.  
Hon. Sherman L. Handy,  
Mayor of Sault Ste. Marie.
5. President's Address.  
Jas. G. Turner, Houghton.  
(Adjournment for lunch.)

##### Wednesday Afternoon, 1:30 p. m.

1. Syphilis of the Liver Simulating Cirrhosis, with Report of Case.  
A. I. Lawbaugh, Calumet.
2. Thirty Years of Obstetrics. A Summary of 3600 Cases.  
Geo. G. Barnett, Ishpeming.
3. Goitre.  
H. M. Joy, Calumet.

4. X-Ray Work.  
Eugene Axtell, Marinette.
5. A Few Points of Hygiene of the Eyes.  
H. J. Hornbogen, Marquette.
6. Anticipatory Drainage in Certain Cases of Appendicitis.  
A. S. Kitchen, Escanaba.
7. Post Operative Management of Abdominal Cases.  
W. K. West, Painesdale.

#### Wednesday Evening, 9:30 p. m.

Banquet at the rooms of the Le Sault de Ste. Marie Club.

#### Thursday Morning, Aug. 5, 9:30 a. m.

1. Business meeting and election of officers and selection of next place of meeting.
  2. Bronchoscopy and Esophagoscopy.  
H. H. Cummings, Marquette.
  3. (Subject to be announced later).  
S. H. Rutledge, Manistique.
  4. Some Chronic Conditions of the Lower Abdomen.  
R. C. Winslow, Sault Ste. Marie.
  5. Demonstration of Fracture Splint.  
Fred Townsend, Sault Ste. Marie.
  6. Some Phases of Insanity.  
F. C. Bandy, Newberry.
- (Adjournment for lunch.)

#### Thursday Afternoon.

Automobile and boat rides to points of interest in and about the Soo.

Several distinguished men from outside the Upper Peninsula have signified their intention of being present and taking part in the discussion.

R. Bennie, Secretary.

Governor Ferris has appointed the following delegates to attend the third annual conference on tuberculosis to be held at Indianapolis, September 29, 30 and October 1, 1915:

J. H. Kellogg, Battle Creek; J. F. Hartz, Detroit; V. C. Vaughan, Jr., Detroit; Herbert M. Rich, Detroit; Collins H. Johnston, Grand Rapids; Ralph Apted, Grand Rapids; A. H. Rockwell, Kalamazoo; E. B. Pierce, Howell; L. W. Toles, Lansing; A. F. Fischer, Hancock; C. M. Williams, Alpena; Don D. Knapp, Flint; F. G. Novy, Ann Arbor; R. C. Main, Marquette; W. J. O'Reilly, Saginaw; John A. Kehoe, Bay City; C. G. Parnall, Jackson; Geo. L. LeFevre, Muskegon; A. M. Hume, Owosso; Edw. Hofma, Grand Haven; J. J. Mersen, Holland; Geo. Switzer, Ludington; Jas. A. King, Manistee; J. M. Wilhelm, Traverse City; D. G. Castell, Pontiac; W. J. Duc, Port Huron and R. L. Dixon, Wajamega.

The following appointments of Chief of Staff and Heads of Departments of Hackley Hospital,

Muskegon have been made by the Trustees, for the year beginning July 1, 1915:

Chief of Staff—Dr. John Vanderlaan.  
Med. Dept. (Allopathy)—Dr. I. M. J. Hotvedt.  
Med. Dept. (Homeopathy)—Dr. G. L. LeFevre.  
Surgical Department—Dr. Frank W. Garber.  
Obstetrical Depart.—Dr. George J. Hartman.  
Gynecological Depart.—Dr. Lunette I. Powers.  
Dept. of Pediatrics—Dr. Clarence J. Durham.  
Eye and Ear Depart.—Dr. William P. Gamber.  
Pathologist—Dr. Lucy N. Eames.  
Roentgenologist—Dr. J. T. Cramer.

The following physicians have been elected members of the staff: Dr. C. J. Bloom, Dr. Burns R. Eastman.

Practically every physician in the State will recall the Gardiner & Baxter Company, which during the period of its existence was known as one of the best haberdashery and clothing houses in the country. The present "M. B. M." Company, which is carrying a regular advertisement in our publication was formed by three of the best known employes of the Gardiner & Baxter Company—Messrs. MacKenzie, Bostock and Monroe, and the good will and traditions of the old company have followed them to the present shop, 51 Monroe avenue, Grand Rapids.

The new general hospital has been opened at the Traverse City State Hospital and is now ready to receive patients. The organization provides that any physician in good standing in the State of Michigan has free and equal rights to the hospital. The law governing it provides, among other things, that the board of trustees may maintain within said institution a general hospital department for the reception and treatment of all emergency cases and others seeking medical and surgical relief other than regularly admitted insane patients of such institution.

Governor Ferris appointed the following delegates to attend the fourth annual convention of the alienists and neurologists of the United States at Chicago July 12 to 16: Dr. E. A. Christian, Pontiac; J. A. Munson, Traverse City; E. H. Campbell and E. J. Brady, Newberry; Geo. F. Inch, A. I. Noble and Herman Ostrander, Kalamazoo; Robt. H. Haskell, Ionia.

The annual meeting of the Michigan Anti-Tuberculosis Association will be held in Grand Rapids September 2-4. Those attending the Medical Association's convention are cordially invited to remain over for this important meeting.

Delta County's Good Health Week came to a close July 1. The afternoon and evening sessions have been most successful and undoubtedly much good will result from this effort to



instruct the public on the laws of health and the prevention of disease.

If there is a physician in Grand Rapids or in Michigan who has a microscope which is not in use, the loan of the instrument would be greatly appreciated by the Grand Rapids Anti-Tuberculosis Society.

Dr. Ralph Apted, Grand Rapids, who was discharged recently from Butterworth Hospital following a gall-bladder operation, has gone to the Augustana Hospital in Chicago for treatment. He will be under the care of Dr. Oschner.

The Kalamazoo State Hospital will in the future give a three-years course instead of two for nurses.

Students taking training at the State Hospital get their surgical experience in the local hospitals down town.

Dr. T. G. Yeomans of St. Joseph has purchased a residence there for the purpose of erecting a hospital, which will be St. Joseph's first hospital, and in a short time a \$10,000 corporation will be organized.

The Exhibit of Latent Syphilis and Gonorrhea made by the Pathological Department of the University under the direction of Dr. Warthin was awarded a gold medal at the Scientific Exhibit of the A.M.A. this year.

The Next Annual Meeting of the American Medical Association will be held in Detroit in 1916. We extend our congratulations to the Detroit profession in having been thus honored by our national organization.

Dr. M. S. Gibbs has purchased the Universalist church and will remodel the church into a private hospital, giving Marshall a long desired institution.

The marriage of Dr. Victor C. Vaughan, Jr., Detroit, and Miss Elsbeth Hosig of Duluth, Minn., took place June 28 at the home of the bride's parents.

Dr. Herbert M. Maynard and Miss Berdie Sherwood were married July 7. They will reside at Tremayne's Corners, where Dr. Maynard succeeded Dr. J. D. Bradfield.

Surgeon-General Rupert Blue of Washington, D. C., was selected as President-Elect of the A.M.A. at the San Francisco meeting.

Dr. Frederick Shillito of Kalamazoo was elected president of the Northern Tri-State Medical Society at its annual meeting in Ann Arbor.

Annual Meeting, Grand Rapids, August 31. September 1-2.

Seldom has an annual program been more inviting or promising for a very profitable meeting.

Dr. A. J. Carlson has been appointed as Escanaba's first full-time health officer.

## County Society News

### ALPENA COUNTY

The regular meeting of the Alpena County Medical Society was held at the Alpena House, Friday, June 20th, Drs. McKnight and Gauvereau entertaining with a six o'clock dinner. Fourteen members were present.

The program of the evening consisted of two discussions. "The Doctor and His Money, and How to Invest it," was the third of a symposium; two of which, "How to Make it" and "How to Get it," had been held at a previous meeting. Dr. J. W. Small led in the discussion which was fruitful in confessions of poor business judgment on the part of those present in investing in oil wells, gold mines and plantations, without any return whatever for the investment. It was the general agreement that investment in life insurance or loans with good security was the safest and wisest investment of capital.

The other discussion was of Dr. Frank Walker's paper on "Mouth Infection," appearing in the June edition of the State Journal. D. A. Campbell, D.D.S., led the discussion of this most interesting and valuable paper.

It is our practice where the subject has not been selected ten days before the meeting by the one appointed to read a paper for the secretary to give him a subject from the current number of The Journal for discussion. This often saves the embarrassment of having a meeting and no paper to discuss.

In conformity with the plan to make a tubercular survey of the state, the Alpena County Medical Society agreed to assist by devoting one day in August to the examination of those presenting themselves to ascertain whether or not they were affected with tuberculosis. Resolutions were passed requesting the mayor and common council to designate the day by proclamation.

O. Bertram, Secretary.

### EATON COUNTY

A special meeting was held June 24th at Eaton Rapids. The invited guests were Drs. James S. Brotherhood, Burton R. Corbus and Alexander Campbell, all of Grand Rapids.

The papers were as follows:

1. Pernicious Anemia (with slide demonstrations),  
James S. Brotherhood, M.D.

Discussion opened by A. G. Sheets, M.D.

2. Vaccine in general practice.

Burton R. Corbus, M.D.

Discussion opened by C. A. Stimson, M.D.

3. Prenatal care (with lantern slide demonstrations)

Alexander Campbell, M.D.

Discussion opened by A. H. Burleson, M.D.

The scientific program was both interesting and instructive to all present.

Following this, "Tuberculosis Day" was discussed and arrangements made, so that all physicians of this county may co-operate with the state committee.

After the meeting members and guests were entertained at dinner by the Eaton Rapids physicians.

Our next meeting will be held at Grand Ledge Thursday July 29. A cordial invitation is extended to the members of the profession generally.

G. M. BYINGTON, Secretary.

### MUSKEGON-OCEANA COUNTY

A meeting of the Muskegon-Oceana County Medical Society was held at the Society's room in the Hackley Public Library Friday evening, June 25th.

A paper on "Secondary Anemia" was read by Dr. R. I. Busard of Muskegon Heights.

It was decided at this meeting to donate \$25.00 to the Belgian Physicians Relief Fund.

Our summer schedule begins July 9th, with a meeting at Shelby, Mich. Most of our summer meetings are held in the small towns throughout Muskegon and Oceana counties. These meetings are thoroughly enjoyed as they afford an outing for the physicians as well as a scientific program.

J. T. Cramer, Secretary.

### Miscellany

*Tanlac.*—Tanlac (The Cooper Medicine Co., Dayton, O.) is a "tonic and system purifier" and is exploited to the public by means of extravagant and absurd claims. From an examination made in the A.M.A. Chemical Laboratory it appears that Tanlac is essentially a vinous extract which contains 15.7 per cent. absolute alcohol by volume, a bitter drug (such as gentian), an emodin-bearing drug (such as buckthorn, rhubarb or cascara), a berberine-bearing drug devoid of hydrastine (such as berberis aquifolium), glycyrrhizic acid (from licorice), and flavored with wild cherry and to which has been added a relatively large proportion of glycerin. The "Tanlac Laxative Tablets" which accompany Tanlac contained phenolphthalein (*Jour. A.M.A.*, June 5, 1915, p. 1930).

*Herbetta Curine.*—A package of Herbetta Curine contained three envelopes, labeled 1, 2 and 3, respectively, and in addition a number of red tablets. The A.M.A. Chemical Laboratory found that No. 1

consisted of tablets which contained soluble iron phosphate; No. 2, of tablets which contained some "bitter tonic," and No. 3, of tablets responding to tests for aloes and aloin. The red tablets were composed essentially of strontium and potassium bromide (*Jour. A.M.A.*, June 12, 1915, p. 2006).

*Lepso.*—The A.M.A. Chemical Laboratory found this to contain bromides, equivalent to fifty-one grains potassium bromide per dose of one-half ounce (*Jour. A.M.A.*, June 12, 1915, p. 2006).

*Iodex.*—Iodex (Menley and James, Ltd., New York) is said to contain 5 per cent. of iodine; the advertising suggests that the effects of free iodine are to be obtained from the preparation, which yet is said not to stain the skin. It is also claimed that thirty minutes after inunction, iodine can be found in the urine. The chemists of the A.M.A. Chemical Laboratory on examination found that Iodex contained only about half the claimed amount of iodine, that the iodine did not behave as free iodine and that after inunction of Iodex, iodine could not be found in the urine. Because of these findings and because of the unwarranted therapeutic claims made for the preparation, the Council on Pharmacy and Chemistry held Iodex ineligible for New and Nonofficial Remedies (*Jour. A.M.A.*, June 19, 1915, p. 2085).

*Venodine.*—Venodine (The Intravenous Products Co., Denver) was stated to be "an Intravenous Iodine Compound" put up in ampules, each of which contains "28 grains of Sodium Iodide,  $\frac{1}{8}$  grain each of Beechwood Creosote and Guaiacol in a suitable vehicle, and excipients to enhance its compatibility with the circulating blood." The "Therapeutic Indications" were said to include "infectious diseases, such as syphilis, tuberculosis, bronchitis, bacteraemias associated with chronic and acute nephritis (Bright's disease), and other infections." The Council on Pharmacy and Chemistry found Venodine ineligible for New and Nonofficial Remedies because it was exploited under unwarranted and grossly exaggerated therapeutic claims; because neither the name nor the advertising matter indicated that it was a preparation of the well-known sodium iodide; and because the combination of two such similar substances as creosote and guaiacol is unscientific, adding mystery to the preparation without increasing its efficiency (*Jour. A.M.A.*, June 26, 1915, p. 2155).

*Calcreose.*—Calcreose (Malthie Chemical Co., Newark, N. J.) contains in loose combination approximately equal weights of creosote and lime. The advertising claims having been revised, the Council on Pharmacy and Chemistry postponed definite action pending submission of proof (1) that the large doses of Calcreose recommended furnish large amounts of creosote to the blood and (2) that patients taking these large doses do not suffer from digestive disturbances, loss of nutrition, albumin in the urine of phenol urine as claimed. At

the same time it was emphasized that this action did not indicate a belief on the part of the Council that enormous doses of creosote are necessary or beneficial in tuberculosis. So far, the Maltbie Chemical Co. has not submitted the required evidence. As the Council's postponement of a report has been made to appear as a quasi-approval, the Council, voted to announce that Calcreose had been refused recognition because the therapeutic claims were exaggerated and unwarranted by the evidence (*Jour. A.M.A.*, June 26, 1915, p. 2155).

**Rheumalgine.**—Rheumalgine (Eli Lilly & Co.) Indianapolis is put up both in tablet form and as a liquid. Each tablet, or teaspoonful of the liquid, is said to contain: "Strontium salicylate from Natural Oil 5 gr., Hexamethylenamin 2 gr., Colchicine 1/200 gr." The Council on Pharmacy and Chemistry found Rheumalgine in conflict with its rules in that unwarranted therapeutic claims were made because the combination is conducive to uncritical prescribing and because the name, being non-descriptive of its composition, encourages thoughtless use (*Jour. A.M.A.*, June 26, 1915, p. 2156).

**Typhoid Vaccine.**—Extensive clinical trial indicates that typhoid vaccine may influence the course of the disease favorably. The results indicate that, if used with discretion, typhoid vaccines do no harm (*Jour. A.M.A.*, June 26, 1915, p. 2139).

**Taurocol.**—The Paul Plessner Co., Detroit, Mich., markets Taurocol and Taurocol Compound Tablets. The company makes a pretense of giving the formula—minus any quantities—thus: "Taurocol is a combination of bile salts, extract of cascara sagrada, phenolphthalein and aromatics." Taurocol Compound Tablets are said to contain, in each, "Taurocol (Bile Salts)" gm. .1296, "Pepsin 1-3000" gm. .0324, "Pancreatic Ext." gm. .0324, "Extract Nux Vomica" gm. .0081 and "Aromatics" q. s. The Council on Pharmacy and Chemistry points out that the composition and the therapeutic properties claimed for these preparations are essentially the same as those claimed for Veracolate and Veracolate with Pepsin and Pancreatin. It reports that the objections made to these also apply to Taurocol and Taurocol Compound Tablets (*Jour. A.M.A.*, April 24, 1915, p. 1441).

For several years, Schering's Synthetic Camphor has been generally accepted as the absolute chemical equivalent of the natural product. Manufacturers of celluloid and explosives, in particular, have conclusively demonstrated that in these industries the chemically elaborated camphor can readily take the place of the natural and they have used it on a large scale at times when the price of the latter had become exorbitant, as for instance, during and after the Russo-Japanese War.

For the physician, however, Schering's Synthetic Camphor has until recently meant little more than another of those awe-inspiring feats of modern organic chemistry which has robbed Mother Nature of so many of her great secrets and has become her close rival by producing a number of our present day necessities from their basic elements in the laboratory and factory, undisturbed by climatic conditions and other vicissitudes of nature.

At every occasion at which Schering & Glatz, the Schering representatives in the United States, have displayed Synthetic Camphor, it proved a source of great attraction, but also of skepticism, and not until minute examination as to odor, structure, taste, etc. had been made, would bystanders believe that nature's camphor factory—the tree—had ceased to be the only source of supply of this most valuable material.

Endeavors by pharmacologic investigators to have Schering's Synthetic Camphor officially accepted as the medical equivalent of the natural product, seem at last to have received adequate recognition by the authorities and the forthcoming new edition of the U. S. Pharmacopoeia is said to do justice to the facts.

Considerable weight must be attributed to the recently published results of an investigation by no less an authority than Prof. C. Bachem of the University of Bonn, (*Medizinische Klinik*, 1915, No. 15) which reaffirms the absolute identity of the synthetic and the natural camphor and also fully establishes the fact that they possess the same medicinal value.

Almost simultaneously, advices have been received from San Francisco that the Grand Jury of the Panama-Pacific Exposition have awarded a medal of honor, the highest distinction given to that class of exhibit, to the Schering Chemical Works for Synthetic Camphor in its various forms.

Only one other award of equal distinction having been made to the German Chemical Industry, the Schering Chemical Works have good reason to be proud of this new appreciation of the splendid achievement represented by their Synthetic Camphor.

Physicians interested in photography, will also rejoice with the Schering Chemical Works and Messrs. Schering & Glatz at the award of a Gold Medal to the Assur Process, the only known means of applying truly artistic, transparent and permanent color effects to photographs, which can be readily practiced by amateurs and an unusual feature of which is the fact that any errors made can be promptly and repeatedly removed without any injury to the photographs.

The AbilenA Company is fortunate in having the approval and endorsement of the Council of Pharmacy of the A.M.A. for AbilenA Water. With such high endorsement, why not use this American Natural Water? They will gladly send a quantity for personal and clinical trial upon request.

Colgate University at its annual commencement at Hamilton, June 22nd, conferred the honorary degree of Doctor of Science upon Dr. T. J. Bryan,



of Chicago, formerly of the Illinois State Food Commission, and now Chief Chemist of the Calumet Baking Powder Co., in recognition of his distinguished scientific attainments.

Dr. Bryan did his collegiate work at Colgate University where he took his A. B. in 1893 and his Masters degree in 1895. After devoting the next few years to the teaching of chemistry, he went to Germany in 1899, where he studied at Gottingen, Heidelberg and Freiberg, from which latter University he received the degree of Doctor of Philosophy in 1901. On his return to this country he taught Chemistry at Wesleyan, Williams and the University of Illinois until 1906, when Governor Deneen, recognizing the urgent necessity for a strong, forceful character to direct the chemical work of the Illinois Food Commission, appointed him Chief Chemist of that body. This position he occupied for nearly eight years, resigning in 1913 to become Chemist in Chief of the Calumet Baking Powder Co. of Chicago. His retirement from public service to engage in commercial work was recognized in an official report as a notable loss of the state.

Dr. Bryan's record in office was marked by high efficiency along the really practical and useful line of raising the standard of food sold in this state and was characterized by a sound, normal common sense coupled with an exact technical knowledge, a combination by no means common to all officials of that period of fads and fancies of food control during the years following the passage of the Food and Drugs Act.

The conferring of an honorary degree of this character upon a scientist engaged in commercial work is unusual and is therefore all the more gratifying to those who know and appreciate the value of Dr Bryan's work.

The University conferred eight honorary degrees in all. Among the recipients and the degrees given were, Acting Secretary of State Lansing, L. L. D., Benjamin Ide Wheeler, President of the University of California, L.L.D. and Frank M. Williams, New York State Engineer, D.Sc.

#### "ARTICLES OF FAITH" CONCERNING CANCER—A PLATFORM UPON WHICH TO UNITE IN THE CAMPAIGN OF EDUCATION.

(1) That the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formed concerning them, and that, in the light of our present knowledge, they hold no special element of alarm.

(2) That the contagiousness or infectiousness of cancer is far from proved, the evidence to support this theory being so incomplete and inconclusive that the public need have no concern regarding it.

(3) That the communication of cancer from man to man is so rare, if it really occurs at all, that it may be practically disregarded.

(4) That those members of the public in charge of or in contact with sufferers from cancer with external manifestations, or discharges of any kind, need at most take the same precautionary measures as would be adopted in the care of any ulcer or open septic wound.

(5) That in the care of patients with cancer there is much less danger to the attendant from any possible acquirement of cancer than there is of septic infection, or blood poisoning from pus organisms.

(6) That in cancer, as in all other disease, attention to diet, exercise and proper hygienic surroundings is of distinct value.

(7) That, notwithstanding the possibility of underlying general factors, cancer may, for all practical purposes, be at present regarded as local in its beginning.

(8) That, when accessible, it may, in its inoperability, be removed so perfectly by radical operation that the chances are overwhelmingly in favor of its non-recurrence.

(9) That, when once it has advanced beyond the stage of cure, suffering in many cases may be palliated and life prolonged by surgical and other means.

(10) That while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest present means of cure.

(11) That among the many advances in and additions to cancer treatment, the improvements in and extensions of surgical procedure surpass those in any other line, and fully maintain the pre-eminent position of surgical palliation and cure.

(12) That there is strong reason to believe that the individual risk of cancer can be diminished by the eradication, where such exist, of certain conditions which have come to be regarded as predisposing factors in its production.

(13) That some occupations, notably working in pitch, tar, paraffin, analin or soot, and with X-Rays, if not safeguarded, are conducive to the production of cancer, presumably on account of the chronic irritation or inflammation caused.

(14) That prominent among these predisposing factors, for which one should be on guard, are: general lowered nutrition; chronic irritation and inflammation; repeated acute trauma; cicatricial tissue, such as lupus and other scars, and burns; benign tumors—warts, moles, nevi (birth-marks), etc.; also that changes occurring in the character of such tumors and tissues, as well as the occurrence of any abnormal discharge from any part of body, especially if blood-stained, are to be regarded as suspicious.

(15) That while there is some evidence that cancer is increasing, such evidence does not justify and present alarm.

(16) That suggestions which are put forward from time to time regarding eugenic, dietetic and other means of limiting cancer, should not be accepted by the public until definitely endorsed by the consensus of expert opinion. Such consensus does not exist today.

(17) That so far as we know there is nothing in the origin of cancer that calls for a feeling of shame or the necessity of concealment.

(18) That it will be promotive of good results if members of the public who are anxious about their health and those who wish to preserve it will, on the one hand, avoid assuming themselves to be sufferers from one or another dreadful disease, but, on the other hand, will submit themselves periodically to the family physician for a general overhauling.

(19) That at all times and under all conditions there is much to be hoped for and nothing to be feared from living a normal and moderate life.

(20) That the finding of any abnormal condition about the body should be taken as an indication for competent professional and not personal attention.

(21) That watchwords for the public until "the day dawns" and the cancer problem is solved, are:—Alertness without apprehension, hope without neglect, early and efficient examination where there is doubt, early and efficient treatment when the doubt has been determined.